

# Air Conditioning & Refrigeration News

The Newspaper of the Industry

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## THE COLD CANVASS

By B. T. Umore

### We've Been Waiting For This

Of course, all we know about it is what we read in the publicity releases, but H. M. Salisbury, manager of Nash's export department, swears that down in South Africa, near Johannesburg, there's a Nash dealer firm that boasts the name of Attit, Urley & Laite.

What's more, Mr. Salisbury claims to have a recent photograph of the dealership as proof of his statement. He says the firm is every bit as active as its name would indicate.

But W. A. (Bill) Bleas, Nash general sales manager, counters with the assertion that South Africa isn't the only place in the world that has dealers whose names reflect their admirable qualities.

He cites, for instance, the case of Joseph Trew, D. A. Trew, and Frank Good, all of Deadwood, S. D., who got together recently and organized the Good & Trew Nash Co. at Pluma, S. D.

### Super Peewee, Super Powered

Last year the Detrola Co. of Detroit brought out a midjet radio and called it the Peewee. Later, a new model was labeled the Super Peewee. Now we note that Sears-Roebuck is featuring a new 6.3-cu. ft. Coldspot "Super powered with 1/6-hp. motor."

### 'Eyes' In Kelvinator Ad Come To Life

When Ruth Fine, blond editorial department secretary and receptionist had finished a secretarial job with a New York private detective agency, she felt pretty sure that no other job would turn up so many surprises.

But after nearly a year in the publishing business, Ruth isn't quite so sure. Take one morning last week for example:

Item No. 1 is a man who busts through the front door, steps up to Ruth's desk and announces: "I'm the eyes in that Kelvinator advertisement that was in your first issue this year. I'd like to get a couple of copies of that issue, please."

"You're wh-wh-what?" asks the astonished Ruth.

"The eyes—the eyes in that advertisement that says something about 'watch Kelvinator'—it was in your paper," replies the gentleman.

Ruth suddenly remembers the unusual full page advertisement with the huge pair of eyes that stared straight at the reader, and she gives the man the requested copies. Watching him leave, she notices a taxi is waiting for him. However, the "eyes" hands her another surprise by climbing into the front seat. He is the driver.

### No Advice on Bars

Item No. 2 is in the form of a phone call from a woman seeking some information:

"Say, where's a good place to open a bar," asks a slightly metallic voice.

Ruth has some ideas of her own on the subject but she is talking for the company so she informs the lady that we are not in the practice of giving such advice, and politely inquires as to how come the lady called.

"Why I called some Merchants Bureau or somep'n," comes the reply, and they gave me your name. You're Business News Publishing Co., isn't you?"

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## Zimmerman Leaves Norge To Become Partner In Agency

DETROIT—Paul B. Zimmerman has resigned as assistant to the president of the Norge division of Borg-Warner Corp., effective Feb. 1, and entered the advertising agency business as a partner in the firm of Grace & Bement, Inc., national advertising agency with headquarters here.

Prior to joining Norge as vice president in charge of sales Sept. 1, 1937, Mr. Zimmerman had been for 10 years successively sales manager and manager of the refrigeration department of the General Electric Co., with headquarters at Nela Park, Cleveland. During the last two years of his association with G-E he was also sales manager of the household appliance division.

Mr. Zimmerman first entered the employ of General Electric by joining the advertising department in 1912. In 1917 he was made advertising manager of the national lamp division of the company, a post he held for 10 years, during which he initiated and

(Concluded on Page 2, Column 2)

## Dealer Held Liable For Performance Of Conditioner

JACKSON, Miss.—In a far reaching decision, the Mississippi Supreme Court last week ruled that an air-conditioning dealer can be held liable if the equipment he sells does not do the job specified. The ruling in effect reverses the old "caveat emptor" axiom and puts the burden to "beware" on the shoulders of the seller.

In this case the Magee Laundry & Cleaners, Inc., won judgment for breach of implied warranty against the Harwell Appliance Co., Jackson dealer, on a conditioner which was alleged to have been inadequate to cool the area as represented. The high court reversed the opinion of the circuit court which had held for the appliance company.

The ruling of the high court said in part:

"If modern conveniences and appliances now constantly coming into use are to be purchased with any degree of safety and devoted to a profitable

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## Cleveland Conditioning Group Elects Officers

CLEVELAND—Officers recently elected by the Air Conditioning Association of Cleveland, Inc. are Milton Thesmacher, Riester & Thesmacher (Westinghouse), president; Lester T. Avery, Avery Engineering Co. (Carnabondale-Worthington), vice president; Hatton Yoder, York Ice Machinery Corp., treasurer; and C. E. Hansen, Smith & Oby Co. (Carrier), secretary.

Other concerns actively interested in the work of the association are Carrier Corp. (contract division), Spohn Heating & Ventilating Co. (Frigidaire), Fairbanks, Morse & Co. (branch), and Contract Welders, Inc. (G-E).

Under the by-laws of the organization, applications for membership are approved by the officers and directors. An initiation fee of \$25 is paid on admission, and dues are \$5 per month, half of which is refunded if the regular monthly meeting is attended.

According to Mr. Thesmacher, this method of refunding dues has resulted in almost perfect attendance, with only three absentees recorded during the past year. The organization has been holding regular monthly meetings since May, 1937.

## Crosley 'Special' Line Aimed At 'Price' Buyers

Two-Temperature Model, 8-Cu. Ft. Units Also Added To Series

CINCINNATI—An entirely new "Special" line of Shelvador electric refrigerators, and some models additional to the "Regular" and "Deluxe" lines previously announced, are being shown by Crosley Corp. to distributors and dealers throughout the country.

Among important additions are 8-cu. ft. models in the "Regular" and "Deluxe" lines, and a 7-cu. ft. "Super Deluxe" two-temperature model.

The new "Special" models come in four sizes, 3, 4, 5, and 6-cu. ft. capacity. They are priced below the "Regular" line, starting with a list of \$99.50 for the 3-cu. ft. model; \$112.50 for the 4-cu. ft. model; \$122.50 for the 5-cu. ft. model; and \$132.50 for the 6-cu. ft. model. All have the Shelvador feature, and are powered with the hermetically sealed Crosley "Electrosaver" unit.

In introducing this new line of low-priced models, Crosley is making a strong bid for business in that substantial percentage of the industry's volume represented by the purchasers in the low-income bracket, says Charles R. D'Olive, vice president in charge of the refrigeration division.

The Special line is designed to round out the picture for the Crosley dealer by giving him four complete series of feature and price brackets; namely, the Special low-priced line, the Regular medium priced line, the Deluxe line, and the Super Deluxe 7-cu. ft. model which incorporates features of frozen food storage facilities and high humidity regular storage compartment. This model is known as the "Frezorcold."

Crosley's advertising and sales promotional activities will be centered around the Shelvador, as in years past. Advertising slogan serving as

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## Rex Cole Establishes Prices on G-E Line

NEW YORK CITY—Rex Cole, Inc., announced last week that it had established minimum resale prices on the 1939 line of General Electric refrigerators. Retail delivered prices, as set under New York State's fair-trade law, were listed as follows: Special flat-top models, \$127.50, \$144.90, \$167.50, and \$184.90; special six, \$154.90; deluxe flat-top models, \$127.50, \$187.50, \$214.90, and \$262; deluxe porcelain flat-top models, \$212.50, \$244.50, and \$289.50; deluxe two-door porcelain flat-top models, \$445.50 and \$546.50.

## R. Cooper Jr.'s 'Prosperity Hotel' Brings In 1,000 Dealers For Unusual Showing of G-E Line

By T. T. Quinn

CHICAGO—"Prosperity" was the keynote of the 10-day open-house showing held by R. Cooper Jr., Inc., General Electric distributor, for its dealers and their salesmen to introduce the 1939 G-E line.

In a distinct innovation in distributor previews, Cooper's new quarters at 444 Lake Shore Drive was converted into "Prosperity Hotel" for the showing. Guests were met at the door by a 6-foot 7-inch doorman, and "registered" at a regular hotel desk presided over by a frock-coated attendant while a colored bellhop checked their wraps and other luggage.

The "hotel" idea was carried out all through the showing. Invitations

## Servel Men Urged By Terhune To Try 'Mass Selling' Idea

By George F. Taubeneck

NEW YORK CITY—E. A. Terhune has an idea. Servel's eastern manager, who was on his feet almost continually through Friday and Saturday at the Servel eastern distributor's meeting, capped the conference by presenting a plan for "mass selling." In a nutshell, his plan is simply that of carrying a sales convention to a group of prospects.

Commercial refrigeration, he pointed out, is sold on the basis of information—and lots of it. How can you do a good selling job, he argues, in a 10-minute interview while the prospect is cutting up hamburger? There just aren't enough hours in the day, he asserts, to spend with each prospect and get the story over to him. So—

1. List your hot prospects.
2. Set a date for a dinner meeting and invite them to it.
3. Arrange for experts to discuss the product from every angle, service, standards, store fixtures, all types of applications, and "making money for the retailer."

If "mass selling" works on you as distributors, reasons Mr. Terhune, it should work on the business men who are prospects for commercial refrigeration.

Cost of dinner, entertainment, and invitations shouldn't exceed \$1.75 per prospect. And that is probably less

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## ASHVE Meeting Shows Research Progress

PITTSBURGH—The American Society of Heating & Ventilating Engineers concluded its forty-fifth annual meeting here last week after the presentation of some 20 technical papers, stressing progress in scientific research work in the fields of physiological reactions to air conditioning, heat transmission through buildings, and the application of solid fuels to heating problems of the average home owner.

More than 550 members and guests of the society attended the meetings, held at the Hotel William Penn.

"Air Conditioning in Industry," a paper on physiological reactions of individual workers to high effective temperatures, was presented by W. L. Fleisher, A. E. Stacey, Jr., F. C. Houghton, and M. B. Ferderber, M.D.

This paper concluded that a rise in body temperature is adequate index of disturbed physiological equilibrium, recommending that this factor be used in limiting length of exposure of workers in hot atmospheres. An average rise of 1/2° in the average worker and 1 1/2° in an occasional worker were suggested as limiting reactions, qualified by the

(Concluded on Page 9, Column 3)

## Utility's Plan Won't Include 'Bargain Offer'

Consolidated Edison To Promote 'Full Lines' In Spring Drive

NEW YORK CITY—No "bargain package" drive, but a general co-operative campaign on several full lines of refrigerators at the regular prices established by manufacturers and distributors, will make up Consolidated Edison Co.'s 1939 spring bid for mechanical refrigerator sales.

The campaign will open about March 20, and will run for four months.

In addition to whatever cooperating manufacturer and distributor firms may do in advertising, Consolidated Edison will spend approximately \$350,000 in advertising and promotional activity.

Finance terms will be the same as those now in effect under the National City Bank plan—three years maximum—which the utility has made available to approved dealers in past campaigns.

No allowance will be set up for trade-in mechanical refrigerators, but there will be an allowance for used ice refrigerators. Figure considered most likely is \$9.50 per unit.

The utility will not buy or stock the refrigerators, as has been the case in some past campaigns, notably the recent "bargain package" promotion on small appliances. All units sold in the drive will be purchased by dealers, through regular sources of supply.

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## \$2,800 In Prizes Offered In Water Heater Drive

NEW YORK CITY—"Money players" in either the sales, engineering, or management end of the electric water heater business will find opportunities aplenty for extra profits in the \$2,800 in prizes offered in this year's Modern Kitchen Bureau promotional campaign on this up-and-coming appliance.

A total of 25 contests will be sponsored, says H. L. Martin, bureau manager. First of these, open to all utilities in the United States, offers a cash prize of \$1,000 and a silver trophy for the best all-around water

(Concluded on Page 20, Column 2)

## N. Y. Bank To Finance Only 1939 Models

NEW YORK CITY—Effective Feb. 15, National City Bank will accept for financing only contracts certifying that the units sold under them are 1939 models, distributors and dealers of electric refrigerators were notified last week by E. F. Jeffe, vice president of Consolidated Edison Co. of New York.

The National City Bank, through its finance plan, has been handling

(Concluded on Page 2, Column 1)

## Refrigeration No Boon, Says Wet Garbage Collector

LEWISTON, Ida.—J. W. Hendrickson, collector of wet garbage, has a complaint to make against modern refrigeration. He has just made a request to the Lewiston council that his salary be increased from \$100 to \$150 a month.

"Modern refrigeration has cut down the amount of wet garbage available for hog feed, and residents throw in razors and bottles," complained Hendrickson.



## Only '39 Models To Be Financed By N. Y. Bank

(Concluded from Page 1, Column 5)  
most of the appliance financing paper for dealers in this territory who have been working under a cooperative arrangement with the utility company. The plan allows maximum terms of 36 months on electric refrigerators.

It is thought here that Mr. Jeffe was referring to this move in his talk last week to Brooklyn appliance dealers when he spoke of action to "definitely stop the practice of building boxes in 1939, putting on them a 1938 label, and selling them at prices 'way below the list prices which existed in 1938.'"

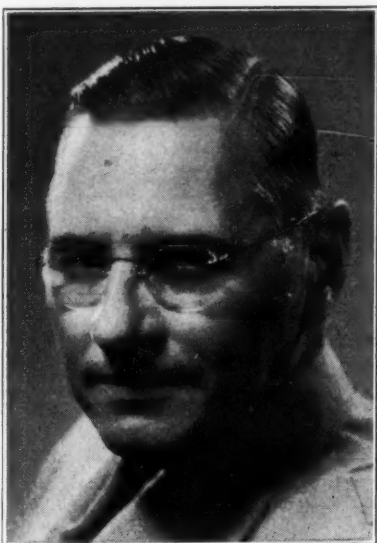
He also had urged wholehearted support of manufacturers and distributors "who are helping you in your selling job, who are protecting you in properly established list prices, and who are not asking you to make up the losses which they incur in competitive volume business."

## Ochiltree Discontinues Its Retail Sales Department

PITTSBURGH—Ochiltree Electric Co., General Electric distributor in metropolitan Pittsburgh since 1925, doing both wholesale and retail business, has announced discontinuance of its retail department.

In the future, the company will operate exclusively in the wholesale field. Branch retail stores of the company and the outside retail personnel have been discontinued.

## Into Advertising



PAUL B. ZIMMERMAN

## Zimmerman Joins Advertising Agency

(Concluded from Page 1, Column 2)  
headed the Lighting Educational Bureau. He started the Food Preservation Council in 1929, two years after General Electric entered the electric refrigeration field, and helped to direct that successful work through its enlarging functions as the Refrigeration Bureau and later the Modern Kitchen Bureau.

With Grace & Bement he will be vice president, treasurer, and head of the merchandising department.

## Cramer-Krasselt Names Arthur Smith To Staff

MILWAUKEE — A. W. Seiler, agency president, this week announced appointment to the staff of the Cramer-Krasselt Co. of Arthur E. Smith, formerly associated with the advertising and sales promotion department of the General Electric Co., in the specialty appliance sales division, and the commercial refrigeration department.

Mr. Smith joins the Cramer-Krasselt Co. with 17 years of experience in selling, advertising, and sales promotion, largely in the home appliance field. Previous to his association with the General Electric Co., he served as advertising and sales promotion manager for a large manufacturer of domestic and industrial vacuum cleaners.

Mr. Smith is now in Milwaukee, at Cramer-Krasselt's home office.

## C.I.T. Opens Sixth Office In Florida

LAKELAND, Fla.—Sixth Florida office of C.I.T. Corp., national sales financing agency, has been opened in the Marble Arcade building here, with T. E. Barham, formerly with the company's Birmingham, Ala. office, in charge. M. G. Gibbs, C.I.T. district manager who completed arrangements for the opening of the new office, will continue his dealer contact work in this territory.

The new office will serve Polk, Highlands, Hardee, and DeSoto counties, and also Plant City.

## No 'Specials' Planned For N. Y. Edison's '39 Refrigerator Drive

(Concluded from Page 1, Column 5)

Department stores may participate in the refrigerator campaign, if they so desire.

This outline of what has been a much-mooted question among distributors and dealers in this territory was given members of the Electrical Appliance Dealers' Association of Brooklyn at their dinner meeting last week in the Columbus club by E. F. Jeffe, Consolidated Edison vice president.

Squelching the "bargain package" bogeyman once and for all, Mr. Jeffe told his audience of more than 400 persons that this spring's campaign would not include the promotion of any single refrigerator "special." Instead, there is to be a general cooperative promotion on several full lines of refrigerators, at the regular prices established by manufacturers or distributors.

Thus far, the lines of four manufacturers definitely are scheduled for the drive: Crosley, Electrolux, Stewart-Warner, and Universal (Landers, Frary & Clark), with other manufacturers as likely participants before the campaign gets going.

One of the chief requirements for participation in the drive appears to be adherence to the plan announced by Mr. Jeffe for Electrolux some months ago, whereby no distributor would sell to an apartment house owner or other so-called "wholesale" buyer at a price below that which regular dealers must pay for the same merchandise.

According to the plan, the difference between the actual dealer cost price of a refrigerator and the price at which it is sold to an apartment house or other wholesale type of purchaser is to be placed by distributors in a pool, for distribution later among cooperating dealers.

"The plan which is presented," Mr. Jeffe told Brooklyn dealers, "is truly one which has as its underlying basis a fair return for selling effort—a stabilization of the automatic refrigerator business, and the adoption by the distributors and manufacturers of a theory which says to the appliance dealer: 'Not only do as I tell you, but I shall do so myself.'"

"If the manufacturer expects to maintain fair list prices, he in turn should maintain the list prices which he himself sets up. No manufacturer has the right to stipulate that his own partner—the cooperating dealer—who sells his products, should live up to a high list price in order that the manufacturer or distributor may thereby make up the losses incurred when he enters into cut-throat competition for volume business."

Although names of non-cooperating manufacturers will not be included in the advertising material for the campaign, all lines will continue to be displayed in the utility's showrooms, it was said.

Referring to various aids to business recovery, Mr. Jeffe told the dealers he was convinced that men put back to work by any such recovery plans can be kept there only if selling results.

"Less than a year ago," he said, "many looked with great doubt on the effort which was being made for the cooperative promotion of the electrical appliance business. From my frequent meetings with dealers and their elected representatives, I know that a confidence, a respect, and a regard has been firmly planted, and that the feelings which at the start almost bordered on distrust have completely disappeared."

"There is no question in my mind as to what results will be attained, and, if these results are attained, it will mean increased and continued employment for those engaged in the automatic refrigeration industry, increased revenues for our companies, increased business and profits to the manufacturers, distributors, and co-operating dealers, and deserved benefits for our customers."

## Griffith Named Distributor For Stewart-Warner

CINCINNATI — Griffith Distributing Corp. has been named distributor for Stewart-Warner refrigerators and gas and electric ranges in southwestern Ohio, southeastern Indiana, and northern Kentucky, reports C. W. Hyde, Griffith general manager.

## THE COLD CANVASS

By B. T. Umor

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The lady is right on the latter count, and we're used to answering a lot of questions, but not to the point of recommending a location for a bar.

## Just Curious

Item No. 3 is a man with a weatherbeaten face and somewhat raggedly dressed who seems to be content to hug the radiator.

"You publish books and things here?" he asks.

Ruth assures him that we do.

"About what?" comes the second question as the inquirer obviously begins to enjoy the air-conditioned atmosphere of the B.N.P. Co. offices.

About air conditioning and refrigeration, the secretary informs him.

"What are they like?" the visitor next wants to know.

Ruth explains what the manuals are about while the visitor turns himself about to toast his other half.

"Do you publish the manuals in German?" comes the next question.

No, says Ruth, a start has been made on publishing them in French, but she has heard nothing about the possibility of their being translated into German as yet. Would he be interested in the manuals if they were in German?

"Oh, no," answers the by-now-thoroughly-warmed intruder, "I was just curious to know. Goodbye."

## Last Roundup on The All-Industry Show

The Vanishing American has reappeared and what's more he's definitely on the warpath. On top of the bitter charges that Nazis have pirated the ancient Indian swastika to serve as a bogey-man symbol, the Blackfoot tribe up in Canada claims that the Lambeth Walk is merely a rehash of their own horn dance.

Those "oi" enthusiasts—and there were a goodly number of knee dippers at "Swede" Nelson's and the Illinois R.S.E.S. chapter's dance Tuesday night at the Stevens—better race for the blockhouse, for the Redman has an ally in industry. Revere Copper & Brass Co.'s new plant will have a "scalping machine," so their publicity says.

One of the youngest and busiest observers at the show was Harold Kain of Koch Refrigerators. Besides being well informed on all the products shown, Young Marse Kain proved to be no mean authority on the customs and music of the "Old South."

That charming mug snapper at the du Pont booth revealed that her subjects had the same stock crack she has heard for years. Nearly every person who sat for a quickie portrait—and there were well over a thousand—coily remarked, "Shucks, I bet I'll break the camera."

Lou Pellegrini of Marlo Coil Co. said he discovered no fewer than 300 abashed souls gazing horrified at a perfect likeness and muttering, "M'gosh, that ain't me."



Advanced engineering, skilled workmen and latest speed production result in high quality refrigerating units.

Universal Cooler Corp., Detroit

## TRAINED MEN Furnished FREE!

Save time, trouble and money when you need men. Use the U.E.I. Free Placement Bureau. No charge to you or prospective employee. It is our contribution to the industry.

We have U. E. I. trained men available in all parts of the country. For 12 years our graduates have made good as shop mechanics, and as installation and service men in leading organizations. Next time you need a competent man, phone, write, or wire the U. E. I. Free Placement Bureau.

UTILITIES ENGINEERING INSTITUTE  
404 N. Wells St. Chicago, Illinois  
Established 1927  
17 West 60th St. New York, N.Y.

WE'LL REST OUR CASE  
**RIGHT HERE**  
IN THE KITCHEN!



● There is one place where any refrigeration insulation must stand *entirely* on its merit . . . where "alibis" and excuses are worthless . . . where hidden weaknesses are brought to light by the tests of actual use. *That place is the kitchen*—the great proving ground for our product, and yours. In that proving ground, Balsam-Wool has proved itself beyond the shadow of a doubt. Proved that it keeps its high efficiency year after year. Proved that it does not pack or disintegrate.

Balsam-Wool rests its case on the millions of refrigerators in which it has been so successfully used. Whether applied in hermetically sealed spaces, or in the form of

sealed slabs, Balsam-Wool gives you the certainty of the top-notch performance which every refrigerator must have today. You'll want complete facts about this *proved* insulation—and they are yours for the asking. Write for them!

## WOOD CONVERSION COMPANY

Refrigeration Sales Division  
360 North Michigan Avenue  
CHICAGO, ILLINOIS  
St. Paul, Minn. New York, N. Y.

**BALSAM-WOOL**  
SEALED INSULATION SLABS  
PRODUCT OF WEYERHAEUSER



## Distributor-Dealer Doings

### 50 New England Dealers Hear Kelvinator Story

MANCHESTER, N. H.—More than 50 dealers attended an all-day sales meeting held here recently by Manchester Coal & Ice Co. to introduce the 1939 line of Kelvinator refrigerators.

Speakers at the meeting included the following executives of the distributorship: A. J. Precourt, treasurer; John M. Dierkes, district manager, and E. A. Norton, vice president.

Others who addressed the gathering were Taylor Harvey, Public Service Co. of New Hampshire; E. J. Demmer, division manager of the Kelvinator Institute; Stephen Kelley, New England manager of Redisco, Kelvinator financing department; and Robert M. Williams, of Manchester, Kelvinator sales representative.

### Economy Auto Wins Grand Prize For Best Window

ROCKINGHAM, N. C.—Economy Auto Store, Westinghouse dealer here, managed by Claude Mask, won the grand prize for the best window display of any merchant in the city during the "Window Shopping Week" recently sponsored by the local newspaper.

Purpose of the promotion was to stimulate business by getting the townspeople to turn out at night for "window shopping" tours. All of the Rockingham merchants "chipped in" with contributions towards a cash award to go to the winner of the contest.

### Quigley Gets Permit For Radio Station

MOBILE, Ala.—Federal Communications Commission has granted permission to S. B. Quigley, Mobile electrical appliance dealer, to construct a radio station to operate daytime on 1,200 kilocycles with 100 watt power. He operates under the name of Quigley Specialty Co.

### Jack Stone Heads Washington Contractors Association

WASHINGTON, D. C.—Jack Stone recently was elected president of the Electrical Contractors' Association of the District of Columbia. Other officers named were R. D. Porter, vice president; Edward R. Bateman, secretary; and Carl S. Winkler, treasurer.

### Frank Rhodes Nears 'Cabinet' Of G-E Topper Club

KINGSTREE, S. C.—Frank Rhodes, leading salesman of L. S. Carter Co., General Electric dealer here, sold his way into G-E's Topper club last summer and now is well on his way toward becoming a cabinet member of that organization.

### Wallace Russell Will Manage Woodwell's Appliance Dept.

PITTSBURGH—Wallace Russell has been appointed manager of the appliance division of Joseph Woodwell Co.

### Lillington Furniture Co. Completes Building

LILLINGTON, N. C.—Lillington Furniture Co. has completed its new building and has instituted a complete electrical appliance department.

### Beverly Co. Established

CHICAGO—Beverly Appliance Co., Inc., has been established at 1341 West 87th St. here by E. Johnston, H. L. Carpenter, and T. Johnston.

### S-W Dealers Are Told Plans For 1939

OKLAHOMA CITY, Okla.—Complete advertising and sales plans were outlined to the sales department of Hughes-Bozarth-Anderson Co., distributors of Stewart-Warner home appliances for Oklahoma and the Texas panhandle, during a two-day meeting at the firm's offices last week.

M. O. Beckham, district manager for Stewart-Warner, told of the firm's new manufacturing plant at Indianapolis where the new 1939 line is being produced.

### Petway & Kendrick Named Frigidaire Dealer

FLORENCE, S. C.—The firm of Petway & Kendrick has been named Frigidaire dealer here. Mr. Petway has had more than 15 years of experience on the road as sales supervisor and in training retail salesmen to sell refrigeration. Mr. Kendrick also is an old hand at the business.

### McCaffery Co. Holds Exhibit In Athletic Club

SOUTH BEND, Ind.—The McCaffery Co., distributor of Westinghouse ranges and appliances in this area, held a one-day exhibit of the new Westinghouse ranges in the Columbia Athletic club here last week.

The Indiana & Michigan Electric Co. cooperated. The company also showed its complete line at the Chicago show.

### Holabird Heads California Electrical League

LOS ANGELES—Graham Holabird, representative for National Electrical Products Corp., has been elected president of the Electrical Development League of Southern California.

Harold D. Conklin, Edison General Electric Appliance Co., has been named vice president; A. A. Schueler, Square D Co., treasurer; and F. L. Hockensmith, general manager.

### Fire Wrecks Keenan's Appliance Store

DOVER, N. H.—Blazing up from its place of origin in the cellar, fire recently swept through the Westinghouse appliance dealership operated here by James P. Keenan, former mayor of this city, damaging the store's entire stock of electrical appliances.

Destroying six apartments in addition to the Keenan shop, the fire caused damage estimated at between \$25,000 and \$35,000, threatened several other stores, and endangered the entire Central Square business section.

### Jenter Elected President Of South Jersey League

CAMDEN, N. J.—C. Robert Jenter has been elected president of the Electrical League of South Jersey. Other officers chosen were Charles H. Commbe, vice president; Isadore Borstein, treasurer; and Howard K. Suckling, secretary.

# WANTED!

A Limited Number of  
Progressive Sales Outlets  
to Handle any Portion or the  
Complete Line of  
General Electric Commercial  
Refrigeration Equipment.  
An Exceptional Opportunity to Increase  
Your Annual Income. New Plan.  
Territories Going Fast! Wire or write  
TODAY for Franchise Details.

G-E's GOING PLACES IN  
COMMERCIAL REFRIGERATION  
AND I'M GOING WITH 'EM!

#### An Invitation to HOUSEHOLD APPLIANCE DEALERS

Here's a quick, easy way to get into the fast-growing commercial refrigeration business with all its profit opportunities! No experience needed. On the new G-E Step-by-Step Plan you can add G-E "Packaged" Commercial Products to your present lines—start as small as you want and grow just as fast and big as you want. Nothing complicated to learn, no installation problems. No burdensome financing necessary. G-E "Packaged" Commercial Products are engineered, assembled and tested at the factory, shipped complete, ready to plug in. Wire or write today for franchise details!

#### An Invitation to COMMERCIAL REFRIGERATION DEALERS

It will pay you to investigate General Electric's franchise before completing your plans for 1939. Find out about the Industry's No. 1 Line of Commercial—complete to the last detail—quality equipment bearing the famous "G-E" monogram, yet that costs no more than the ordinary variety! Find out about General Electric's complete field service that includes expert sales, engineering, installation and servicing support. Find out why it is to your advantage to have the backing of the world's largest manufacturer of electrical apparatus. Write or wire NOW for complete information.

General Electric Co., Commercial Refrigeration Sec. D G2, Nela Park, Cleveland, O.

**GENERAL ELECTRIC**  
COMMERCIAL REFRIGERATION



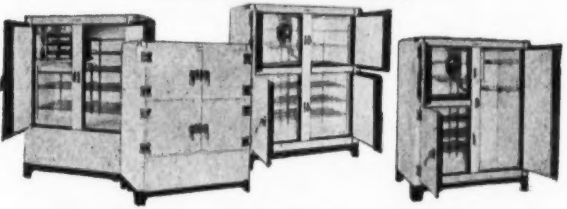
THE INDUSTRY'S #1 LINE  
OF COMMERCIAL  
REFRIGERATION EQUIPMENT



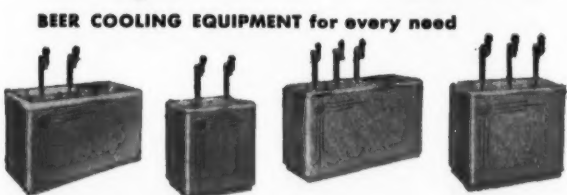
WATER COOLERS for offices, factories, every purpose



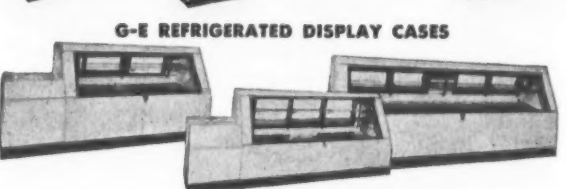
BEVERAGE COOLERS for wet or dry storage



FOOD STORAGE CABINETS



BEER COOLING EQUIPMENT for every need



G-E REFRIGERATED DISPLAY CASES



G-E REFRIGERATED MILK COOLERS



CONDENSING UNITS—1/4 to 50 h.p., air or water cooled

Conditioned-Air Cooling Units; Spinner Finned Cooling Units; Ice Makers; Ice Cream Cabinets; G-E Refrigerated Butcher's Walk-In Coolers, and Cabinets for Bakeries, Florists, etc.; Refrigeration for Storage Lockers, Fruit Storage, etc.



# WESTINGHOUSE

WITH THIS

## Sensational New Refrigerator

with **NEW**  
**TRUE-TEMP**  
**COLD CONTROL**



Holds refrigerator temperature where you set it — regardless of room temperature fluctuations. Gives better food protection with five zones of STEADY cold.

with **NEW**  
**MEAT-KEEPER**  
*a year ahead*



Slides in and out under the froster — has 15 pounds capacity, 50 per cent more than last year.



It's headline news for 1939! The new Westinghouse Refrigerator — pacemaker in better food protection, Kitchen - proved convenience, and long, low-cost operation — sales - maker and money-maker for dealers. Here's why —

**STYLED TO SELL . . .** New cabinet lines make it the most beautiful refrigerator in all Westinghouse history. New interior design combined with colorful Peasant Ware Food-saver dishes and water server make it more beautiful than ever inside.

**EQUIPPED TO SELL . . .** New features are packed with sales appeal for every prospect. For the first time in any refrigerator — True-Temp, the cold control that really *controls*. For the first time in any refrigerator—a covered, vented Meat-Keeper with 15 pounds capacity! For the first time a door liner of special white Micarta! And besides all this, the famous Economizer Mechanism with new cushion mounting — for the first time a truly “plug-in” refrigerator!

**PRICED TO SELL . . .** A new simplified line includes Emperor and Aristocrat models in porcelain and Dulux respectively, Hostess models in the medium price field, and the new Economy-Six for the budget shoppers. With this line you can meet any prospect's requirements.

**ADVERTISED TO SELL . . .** Westinghouse plans for 1939 include a powerful program of national magazine advertising, hard-hitting newspaper advertisements, displays, selling literature and everything you need to set the pace in your own territory against any kind of competition you have to meet.

If you are not already a Westinghouse Refrigerator dealer, get the details from your distributor — or write us direct.

**Westinghouse Electric & Manufacturing Company**  
MANSFIELD, OHIO

Stay out in front with the **PACEMAKER**



# SETS THE PACE!



IT'S THE  
**PACEMAKER**  
FOR '39

in better food protection  
•  
in greater convenience  
•  
in long,  
low-cost operation

*Kitchen-  
proved*

*Every house needs*  
**Westinghouse**



## Westinghouse Refrigerator



# Major Appliances

## 'Get Over Into Clover' Is G-E's Contribution To Dramatization of Appliance Selling

CLEVELAND—General Electric's 1939 product and sales story will be taken to dealers and salesmen all over the country in the form of an elaborate two-act, 16-scene road show titled "Get Over Into Clover."

In addition to its sales story, the play is designed to dramatize the advantages and opportunities that are offered in the electrical appliance business, and by General Electric specifically.

Written and directed by Carle Robbins, editor of G-E's "News Graphic" dealer magazine, the entire presentation is in the form of a dramatic play, without a single chart or speech to mar its continuity. Theme of the play is built around a typical appliance dealer, and the action of the play brings out his major problems, and how they can be solved.

### QUICK SCENE CHANGE

As the audience enters the meeting hall, they see a large, full-sized, two-story colonial home, complete in every detail, symbolic of G-E's principal appliance market. Soon after the opening scene, the front of this home slides away, bringing into view a typical appliance store.

A number of dramatic scenic changes follow in quick succession, carrying the continuity of the show to a grand climax.

Fred Warner, the typical appliance dealer, dreams he has sold a complete electrical home to Banker Tillson, but awakens to find himself in the usual muddled position of a dealer selling one make of refrigerator, another line of ranges, and other appliances of miscellaneous manufacture.

### FATHER-AND-SON

How Fred solves his problems, finds a job in his own store for his boy, just graduated from college, becomes a "full-line" dealer, and finally does sell that complete home equipment makes up the story of the play.

A 35-mm. sound film, telling a panoramic tale of G-E science, research, manufacturing, etc. has been designed specially to tie in with the show and its dramatic story.

Conducted by G-E's appliance and merchandise department, the show will be sponsored in cities throughout the country in cooperation with distributors. In most cities, the show will be presented in hotel ballrooms or public auditoriums, since the size of the stage setting makes impossible the use of small quarters.

More than 20,000 people are expected to see the production during its swing through the country. Dealer, department store, and utility principals and their salesmen will be invited to attend.

In promoting attendance in the various cities, attractive invitation folders will be mailed to a selected

list, followed up by personal letter and reminder postcards. In most cities, a lunch will be served just prior to the show, and all those in attendance will receive a four-leaf clover badge, tying-in with the title of the show.

A three-and-a-half hour affair, the show will begin promptly at 1 p.m. and end at 4:30 p.m.

Differing from previous sales presentations in that all pertinent sales and product information is woven into a complete and dramatic play, without a break in its continuity, the show will be carried across the country by two troupes, each traveling in its own private Pullman and baggage car.

### PROFESSIONAL CAST

Each troupe will be made up of seven professional actors, four union stage hands, a stage manager, business manager, executive manager, and advance man. Eastern troupe will open at New Orleans on Feb. 8, close in Buffalo on April 4. Western troupe opens in St. Louis on Feb. 10 and closes at Cleveland on March 29. In all, 50 key cities will be visited with the production, G-E officials announced.

Both sections will travel as completely self-contained units, carrying everything necessary to present the show, including platform, proscenium arch, lighting equipment, scenery, etc.

### COMMITTEE IN CHARGE

A large committee is in charge of the show, with A. L. Scaife, appliance advertising and sales promotion manager, acting as general chairman, and Jean De Jen, sales campaign manager, as general secretary and publicity manager.

Other committee members are R. W. Johnson, vice chairman; L. H. Miller, W. E. Hart, R. E. Brogan, F. C. Stevens, and C. B. Robbins. C. R. Pritchard and R. W. Evans are on the distributor council.

### All Records Broken By Chicago Mart

CHICAGO—Topping all previous highs for attendance and buying, the International Homefurnishings Market closed in the Merchandise Mart Jan. 21 with a record registration of 10,383 buyers and orders whose total dollar value is expected to exceed \$35,000,000.

Volume of sales for the total market is 42% greater than in January, 1938, reports Percy Wilson, managing director of the Mart, while individual gains in some lines were as high as 100%.

Manufacturers of toys, housewares, and major appliances ended the market 33% ahead of last year, with a universally optimistic sentiment.

## Reports Indicate That Bureau's Special Sales Drive Passed Quota

NEW YORK CITY—Preliminary reports from dealers and distributors who participated in Modern Kitchen Bureau's October "Discovery Month" drive on electric ranges and water heaters indicate that the quota of 30,000 ranges and 8,000 water heaters will be passed when all sales are reported.

Actual sales reported for the October drive totaled 21,012 electric ranges and 6,399 water heaters, according to a compilation by Bureau headquarters. These figures include sales of 20,464 ranges and 6,134 water heaters by 128 companies whose range quotas for the campaign totaled 23,169 and whose water heater quotas totaled 6,018. In addition, 13 small utilities have so far reported 548 range and 265 water heater sales.

Final figures are not represented by these totals. Of the 187 utilities which enlisted in the campaign, 59, almost one-third of the companies, have not yet submitted their sales figures. It is believed that when complete returns are available the original quotas will be exceeded by wide margins.

Sales quotas for the national campaign were broken down into quotas for each cooperating utility territory. Actual operating costs in each section were used to break down the "costs too much" objection on the part of electric range prospects.

A preliminary survey was made of 1,000 housewives who owned electric refrigerators but did not own electric ranges. Anticipated costs of cooking by electricity averaged \$10 per month. A second survey of 1,284 actual electric range users revealed that 80% of the housewives placed the cost under \$3. These figures were from a "before and after" study of electricity bills.

For local promotion a complete seven-point program was outlined in a folder and sent to dealers by the National Electric Water Heating Council. The booklet was used for training salesmen and for mailing and hand-outs to prospects.

Bureau distributed during "Discovery Month" 100,000 broadsides on the range campaign and 43,000 on the water heater campaign. Additional material distributed by manufacturers is believed to have raised the total number of direct mail pieces used in the campaign to more than 1,000,000.

Local support of the campaign was reported as varied and effective. Liberal use of the window banners, posters, leaflets, and booklets prepared by the Bureau was made. A number of participating utilities produced complete plan books of their own, patterned on the Bureau's plan book, and adapting the national program to local conditions.

The attempt to establish national sales quotas for ranges and water heaters for a campaign activity was well received by the various utilities. These quotas for the individual utility territories were worked out by the Bureau's regional directors.

### Brabham Joins Staff Of Bass Electrical

FLORENCE, S. C.—Lyn Brabham, who has been in the appliance business for a number of years in various capacities with both utility and distributor, has become associated with Bass Electrical Co., Westinghouse dealer here.

## Department Store Credit Men Warn Against Lower Instalment Sales Charge

NEW YORK CITY—Under the chairmanship of C. H. Dicken, credit manager of William Taylor Son & Co., Cleveland, the Credit Management division of the National Retail Dry Goods Association, meeting during the association's convention here, heard cautions against a downward rate of carrying charges for instalment sales, and the stressing of the increasing responsibility of the credit man towards consumer relations.

In discussing "Should the Carrying Charge Be Reduced?" F. J. Fitzpatrick, director of credit sales for the Kresge Department Store, Newark, N. J., attacked the tendency to a lower rate of carrying charges for instalment sales, precipitated by the competitive influence. The trend, said Mr. Fitzpatrick, is in direct contrast to the position taken by the finance companies.

### 'DON'T MEET FHA'

He stated that while the usual rate of one-half of 1% a month on the original unpaid balance still is the most widely prevailing policy of putting a charge on instalment sales, some organizations have cut this rate to a 5% per annum basis on the original unpaid balance as a move to compete with FHA loans. It also was pointed out by the speaker that other stores have cut the rate one half on a community-wide basis.

Increased extension of credit which charge customers are being given minus any carrying charge also was discussed by Mr. Fitzpatrick, with mention made of the three monthly payment plans of the men's clothing retailers and the so-called "Revolving Credit Plan" of the John Wanamaker organization.

### COVER EXPENSES?

Going into the question as to whether current credit charges should be reduced, Mr. Fitzpatrick said it depends upon whether the present rate produces sufficient income to cover all credit department expenses, and he quoted figures to show that it does not in a preponderance of cases.

A suggestion was made by the speaker that stores could consider a plan to omit the carrying charge for the first three months on all sales plans extending beyond such a period in order to meet the argument that there is no extra charge for charge customers of stores.

"While the suggestion may jolt you somewhat," said Mr. Fitzpatrick, "I believe it is worthy of consideration. All we ask you to do is to stand pat long enough at least until you have developed some real cost facts regarding your own deferred operations. Before we change our rate in the department store field we certainly should know more than we do about the problems involved."

### CAN'T CONCEAL DIFFERENCE

Mr. Fitzpatrick went on to say that there is no question in his mind that the one vulnerable aspect of current retail instalment selling practices continues to be the retailers' handling of the carrying charge, and he advocated caution before taking a slip in the wrong direction. Attempts to hide the difference in price between cash and instalment sales were deplored by the speaker, who added:

"That his credit department expense in connection with carrying instalment accounts is higher than that of carrying charge accounts and

that he cannot charge the cash customer the same price as the instalment customer no fair minded consumer will dispute."

M. I. Behrens of the executive office of Ludwig Baumann & Co., New York, in discussing "Current Instalment Credit and Collection Problems," declared that as the management of the store has come to fully realize its duty to the community through honest advertising and merchandising methods, the credit and collection department is beginning to realize its responsibility to the customer.

It is up to the credit department, Mr. Behrens declared, to know how much the customer is able to pay, and it is the responsibility of the credit manager to avoid overloading the customer, which, he believes, is one of the greatest evils in the retail stores.

The speaker continued that there is no substitute for a customer's ability to pay whether the plan attempted is a large down payment, wage assignments, or guarantees. He said that wage assignments are one of the worst policies a store may pursue and that if they are used they are the worst form of advertising for a store, for they make bad friends with customers, their friends, and relatives, and their employers.

It is the duty of the credit man, Mr. Behrens asserted, to inform the management that easy credit does not go with competitive prices. He added that either method of doing business may work out successfully, but the two cannot be used together.

## G-E Refrigerator Orders 20% Over Estimate

NEW YORK CITY—Orders for refrigerators received by General Electric for delivery in January are 20% in excess of the company's budgeted volume, Carl M. Snyder, general sales manager of the appliance and merchandise department, told a luncheon meeting of utility executives last week at the headquarters of Rex Cole, Inc., Long Island City.

Mr. Snyder, together with other General Electric executives and officials of Rex Cole, looked optimistically to 1939.

"Merchandise," declared Mr. Snyder, "is moving in improved fashion to the consumer and if orders continue to come in at the present rate, they will represent a tremendous increase in volume, greatly in excess of 1938 and above the 10 to 15% anticipated gains in 1939."

Rex Cole, president of Rex Cole, Inc., the General Electric's New York metropolitan distributor, was enthusiastic about the prospects in the New York City territory. In a statement made just before the luncheon, he disclosed that his company had sold \$75,000,000 worth of refrigerators since its inception and that in 1939 he expected a 40% rise.

### McNaughton Opens South Bend Store

SOUTH BEND, Ind.—F. J. McNaughton, formerly buyer in major appliances for William Taylor & Son in Cleveland, Ohio, and factory representative for Frigidaire, has opened an electric appliance store here under the name, Indiana & Michigan Supply Co., handling Kelvinator.

## Exacting Production

The individual analysis tag on every Ansul cylinder is but final evidence of the scientific checking that has followed every step in the production of Ansul chemicals.



... guarded by precise step-by-step analyses, guarantees **ANSUL Certified Quality**

**ANSUL**

ANSUL CHEMICAL

**SULPHUR DIOXIDE  
METHYL CHLORIDE**

COMPANY • Marinette, Wis.

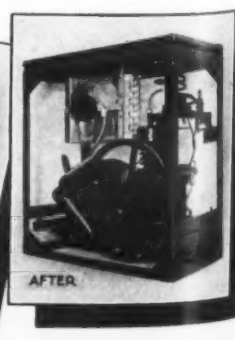
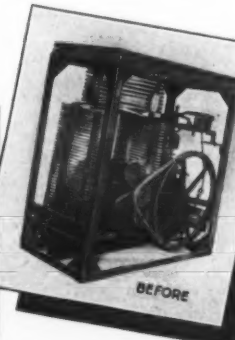
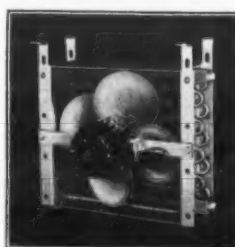
THERE IS AN ANSUL JOBBER NEAR YOU

## KRAMER MIDGET UNICON



CONDENSER  
CHANGE-OVER  
FOR MODEL 'K'  
COMPRESSORS

WRITE FOR BULLETIN 239



**KRAMER**

TRENTON AUTO RADIATOR WORKS  
TRENTON, N. J.



# Twenty-Five Years' Experience Back of This One!



## *Kelvinator Steals the Show Again...*

### FEATURES OF NEW SILVER JUBILEE CONDENSING UNITS

- 1—More compact design. (Units require average of 12½% less floor space, 21% less head room.)
- 2—Improved appearance.
- 3—Close precision machining of moving parts.
- 4—Continuous tube, continuous fin condenser, single-pass, double-row on ½ H.P. and smaller. Multiple-pass, parallel-flow with hydrogen-welded manifold on ¾ H.P. and up.
- 5—Hydrogen-brazed receiver—vertical type—less critical refrigerant charge.
- 6—One piece rigid cast-iron base.
- 7—Quiet operation, with minimum of vibration.
- 8—Easily accessible liquid line valve and cleanable strainer.
- 9—Skirted condenser shroud—increased rigidity and safety.
- 10—One piece suction service valve and flange—eliminates unnecessary joints.
- 11—Refrigerant seal and seat removable without removing crank shaft.
- 12—High starting torque, refrigeration-duty motor.
- 13—ALL motors with thermal overload protection—automatic reset up to and including ½ H.P.
- 14—Every unit equipped with pressure control. Dual controls with built-in high-pressure cut-out ½ H.P. and up.
- 15—Freon-12 refrigerant, standard.
- 16—Higher efficiency due to suction and discharge valve-in-head design.

### with **NEW SILVER JUBILEE CONDENSING UNITS**

DEVELOPED for Kelvinator's 25th Anniversary and "charged" with the design and production experience of those 25 years, Kelvinator's new Silver Jubilee Condensing Units make their bow to the refrigeration industry and its wide field of prospects.

Here are condensing units that are *something!* More than you'd expect, even from Kelvinator... what you couldn't, in fact, expect from anyone else. For only an engineering "know-how" built up step by step for a quarter of a century could produce this line.

You'll say it's the "hottest" cold-making line you ever had the chance to handle. After all, it is *performance* against *price* that interests you.

Your customers will be quick to realize the advantages of this Silver Jubilee line. New features. Greater ease of service and installation. Balanced design. Just the right size of motor, block and condenser. An engineering achievement!

Table of features at left is there to shoot at if you think we are too enthusiastic. Or to back up your decision to *handle* these new units. Use coupon in either case.



# Kelvinator

## COMMERCIAL REFRIGERATION

KELVINATOR, Division of Nash-Kelvinator Corporation,  
Dept. K-26, 14250 Plymouth Road, Detroit, Mich.

Gentlemen:

I've got an open mind. Send more information on Silver Jubilee Condensing Units.

Name \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_



## Commercial Refrigeration

### New Markets & Easier-To-Sell Equipment Keep Commercial Sales Up, Say Servel Men

(Concluded from Page 1, Column 4)  
than it costs to send a salesman to make a call. Mr. Terhune himself promises to help arrange each meeting.

President Louis Ruthenburg was principal speaker at the banquet Friday night. Others who appeared on the two-day program, at which the 1939 Servel "Silver Fleet" line of compressors was introduced, included Harry Newcomb, general manager; Paul B. Reed, service manager; Clyde Ploeger, chief engineer; W. J. Aulsebrook, assistant sales manager; Harry F. Bell, district manager; C. L. Olin, applications manager; A. M. Schmitz, eastern engineer; M. T. Zaroteschenzeff, quick-freezing engineer; E. A. McGovern, du Pont refrigerant expert; and Victor Moss and J. D. Kelter of the Moss Mfg. Co., who talked on ice cream handling equipment.

#### MORE SALES POSSIBILITIES

"The sales curves of such phases of the commercial refrigeration business as store fixtures, beverage cooling, beer cooling, ice cream applications, frozen food storage, locker storage, and replacements show definitely that saturation of the commercial market is more than compensated for by the growth of sales possibilities in these fields," pointed out Mr. Terhune.

Several years ago, he observed, the most important considerations in appointing a commercial refrigeration distributor were:

- (1) A big bankroll to "weather the storm."
- (2) A large and expensive service department to keep the machines sold.
- (3) A highly trained engineering department to figure out the various applications.

#### CHEAPER OPERATIONS

Today, he continued, there are many commercial distributors whose financial statements wouldn't earn them limited credit with the big finance companies. More than likely they "farm out" their service to an independent service man. And today experience, plus more highly diversified lines, is eliminating the necessity for expensive "estimating."

The self-contained commercial installation, he averred, is becoming "the thing" in the east.

A manufacturer or distributor who persists in offering his product in one package and his machine in another, Mr. Terhune predicted, will soon find himself as obsolete as a household refrigerator distributor who would deliver the cabinet, coil, and machine in three separate crates (as was done 10 years ago) and expect the dealer to put the puzzle together.

As for air conditioning, Mr. Terhune suggested that "most distributors and manufacturers of air conditioning are afflicted either with a biliousness of mind or a miscarriage of ideas on the subject of merchandising the product."

#### WHAT'S WRONG?

What's wrong with the air-conditioning industry? Mr. Terhune answers:

- "(1) The design and engineering are wrong.
- "(2) The merchandising is wrong.
- "(3) The prices are wrong."

District Manager H. F. Bell observed that there has been a noticeable change in the type of dealers who sell commercial refrigeration. In the past, he said, radio dealers, hardware stores, and furniture stores sold it. Today, however, the majority of commercial refrigeration dealers are specialists in that field.

This elimination of unspecialized dealers, he stated, has "reduced the rabid competition which formerly prevailed, and has made possible greater profits to the distributor who specializes on a complete line of commercial units."

#### SELL SMALL STOREKEEPER

With the self-contained display case, he added, "it has become possible for the distributor to sell the smaller storekeeper because of a lower selling price, and with a greater percentage of profit due to lower installation costs."

Mr. Bell discussed potent new markets for commercial refrigeration sales, which can be outlined as follows:

**Fruit and vegetable storage.** Wholesalers need refrigerated storage rooms. With them they can buy larger quantities at reduced prices. Owners of fruit orchards also are good prospects, and when they buy it means an order of units from 2 to 10-hp. capacity.

**Beer cooling.** New applications in this field include precooling the beer in kegs, using forced-draft circulation through ducts from the pre-cooler to the dispenser, and refrigerated tanks and coil boxes. Mr. Bell called attention to the fact that in several eastern states there is legislation pending which would require tavern owners to precool the beer on their premises.

#### POTENT NEW MARKETS

**Carbonated beverages.** Carbonators can employ refrigeration to obtain any desired quantity of water at a pre-determined temperature, which permits a constant pressure in producing the carbonation. Syrups should be kept in refrigerated chests until used—an application generally overlooked. And finally the dispenser needs refrigeration, for if inadequately cooled, the carbon dioxide will escape rapidly as the beverage is being transferred to the glass, and a "flat" taste will develop.

**Counter freezers.** This item is growing rapidly. Prospects include dairies, schools, drug stores, beaches, and roadside stands.

**Quick-frozen foods.** This market appears to be opening up at last.

**Locker storage.** Pioneered in the west, locker storage is just beginning to take hold in the east. Mr. Bell sees a big future for it in the next few years.

**Replacements.** Mr. Bell suggests making a complete canvass of the territory to determine replacement needs. On this type of business, the majority of sales are for cash, he states, fewer contacts are needed to close the sale and installation costs are lower.

P. B. Reed, service manager, discussed the chemical action of refrigerants on aluminum, the sealed crankcase principle in low-pressure refrigeration, interchangeability of Servel compressors, controls, and motors with built-in protectors.

#### NEW YORK WAREHOUSE

Mr. Terhune then returned to discuss the new "Silver Fleet" line (see description in Jan. 25 issue of AIR CONDITIONING & REFRIGERATION NEWS). He announced that in 1939 a factory operated warehouse of standard machines would be opened in New York City. From this distribution point, distributors in the eastern states can get overnight or 24-hour delivery.

C. L. Olin, manager of the applications department, stated that commercial refrigeration started as an off-shoot of the household refrigerator industry. Aside from enlargement upon ideas borrowed from household machine design, progress up to a few years ago was slow, he declared.

#### THE NEW TREND

Along about 1934, however, came the beginning of the trend toward self-contained fixtures. In its train came demands for (1) compactness, (2) high overall efficiency, and (3) quiet operation.

To get compactness, compressor dimensions were reduced. Head suction valves and greater displacement followed. Compact concentric tube and multiple shell-and-tube condensers were developed.

High efficiency meant maximum capacity at minimum motor input and minimum condensing water consumption. These were accomplished through more precise machinery, and through better lubrication, both to reduce friction and carry away frictional heat.

Compressor noise has been reduced through study of the power pulsation occasioned by the compressor stroke, and the pumping of gas through the compressor valve. Increasing the

frequency of the discharge stroke, decreasing the quantity of refrigerant per stroke, and new valve construction designs aided materially.

Mr. Olin paid tribute to the quality of the labor which goes into Servel products, pointing out that hundreds of workmen have been with the factory for five years or more, 652 men wear 10-year buttons, 265 have been steadily employed for 15 years or more, and 187 have seen 20 years of service or more.

W. J. Aulsebrook, Servel's assistant sales manager, said that commercial refrigeration could be sold anywhere, regardless of politics or business conditions.

"Ed Humphries," he stated, "has sold 'em in the woods of New England where the people are so backward they still vote the Republican ticket, and where the natives quit work if the thermometer goes up to 80°."

"Bob Dunville has sold 'em in Virginia where the Democrats are still conservatives and where the summer is 10 months long."

"Majestic has sold 'em in New York where they have all kinds of weather, and where they don't believe in anything."

### Storage To End Fresh Meat 'Famine'

JONESBORO, Ark. — Northeast Arkansas farmers who are tired of smoked meats will soon enjoy their own fresh beef and pork the year around when the first freezer locker storage plant is completed here. The system is being constructed by the Home Ice Co. of Jonesboro and will be opened as the Home Locker Storage Co.

The plant will employ 260 individual lockers, each capable of storing 250 lbs. of fresh meat.

The new plant will receive carcasses, chill them in a separate room, and cut them into roasts, steaks, chops, and other pieces. Further processing will include the manufacture of sausage and hamburger.

The cuts will be wrapped, marked for identification, and placed in the freezer room. After they are frozen they will be stored in lockers where the temperature will remain below freezing.

Lockers will rent for \$10 a year. Processing charges will be 1½ cents a pound, which seems to be the standard charge in the corn belt states.

### \$25,000 Locker Storage Plant Underway In Wisconsin

FORT ATKINSON, Wis.—A 400-locker cold storage plant is under construction on Janesville Ave. here, by the Wisconsin Farm Products, Inc., a concern headed by Alfred Cook, George Markey, and Howard Cook, all of Fort Atkinson.

The plant, which is estimated to cost about \$25,000, will be one of the largest and most modern in southern Wisconsin, the sponsors claim.

Provision is being made for an additional 400 lockers if needed. The extra space will be used as a storage room until demand warrants installation of more lockers.

### Thiel To Distribute 'Russ' Line In Minnesota

ST. PAUL—R. H. Thiel has been appointed distributor in Minnesota for the "Russ" line of commercial refrigeration equipment by Bastian-Blessing Co.

### Undabar To Set Up Own Distribution System

ST. LOUIS—Undabar Cooler Corp., manufacturer of electric beverage coolers and display cases, has discontinued the arrangement whereby its products were sold exclusively through General Electric distributors, and in the future will appoint its own distributors.

The announcement of the company's new policy was made by E. W. Jones, who was recently appointed vice president in charge of sales for Undabar Cooler Corp. Mr. Jones was formerly director of sales for the beverage cooler division of Portable Electric Elevator Mfg. Co.

### Court Names Receivers For Ottenheimer

BALTIMORE—Howard H. Conway and I. William Schimmel have been appointed receivers for Ottenheimer Bros., Inc. under bond of \$7,500, and the corporation has been dissolved by order of the Circuit Court of Baltimore.

The order was issued upon application of American Ice Co., which alleged that it was a creditor of the company in the amount of \$1,067, and that the defendant was insolvent in that its liabilities exceeded its total assets.

According to Mr. Schimmel, no effort will be made by the receivers to operate the business. If it cannot be sold as a whole, the assets will be sold piece-meal and the business will be liquidated, he said.

### Georgia Power Missed Quota For 1938

ATLANTA — Columbus was the only division of the Georgia Power Co. to outsell its 1938 commercial appliance quota, company officials announced recently. Columbus salesmen sold \$63,127.11 worth of commercial equipment, against a quota of \$63,000.

Sales by the company totaled \$282,922.69, which equaled only 80.8% of the \$350,000 commercial quota for last year. Refrigeration and water cooler sales reached \$130,047.44 against a quota of \$126,890, and miscellaneous commercial sales amounted to \$32,765.46—more than twice the \$14,470 quota.

Sales fell short of the quota in other commercial equipment classifications. Sales of air-conditioning equipment amounted to \$6,473.87, and sales of water heaters reached a total of \$10,425.

### Creditors of Roto Asked To Accept 30% Payment

DEXTER, Me.—Creditors of Roto Display Case Co. have been asked by Weatherbee & Weatherbee, attorneys, to accept 30 cents on the dollar in full settlement of their claims against the company, rather than to allow it to be forced into bankruptcy.

Property of the company has been attached by several creditors, the attorneys report, and it appeared that the company might be forced into insolvency if some settlement of its debts could not be effected by Feb. 1.

Officers of the company believe that they will be able to pay all claims if creditors agree to accept a 30% payment in full settlement, the law firm states.

## BEERADOR BOOMS BEER SALES

Unique Display! Merry-go-round shelves cut handling in half!

A spectacular refrigerator that displays beer. Put warm beer in at the front. Give shelf a quarter turn. Take out cold beer at front. Holds 21 cases. Diameter of only 37 inches. Save floor space.

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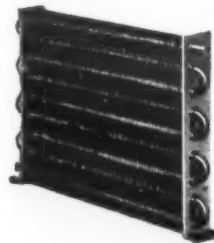
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## REPLACE WITH BUSH CONDENSERS

### EFFICIENT — ECONOMICAL

### AIR COOLED AND WATER COOLED



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# Air Conditioning

## Central Bureau Cuts Engineering Costs By Making Duct Layouts For Public

By Henry Knowlton, Jr.

CLEVELAND—One of the most unusual organizations of its kind in the country today is the Central Bureau for Heating and Air Conditioning, operated here by C. M. H. Kaercher, a registered mechanical engineer who was formerly connected with the Forest City Foundry Co., and who is now secretary of the Cleveland section of A.S.H.V.E.

Formed in 1935, the Central Bureau was established by E. P. Ferris for the purpose of educating the sheet metal trades in Cleveland to make better layouts and more satisfactory duct designs. For this purpose the Bureau was subsidized by the Forest City Foundry Co., Independent Register Co., Auer Register Co., J. M. & L. A. Osborne Co., the Spencerian School, and others.

### BECOMES INDEPENDENT

Gradually the Bureau began to make sheet metal layouts for the concerns interested, and finally reached a point where enough revenue was received from this source to make the Bureau an independent business, requiring no subsidy.

From the beginning, the Bureau has followed a policy of giving free advice to the public, although a charge is made for layouts, supervision, and any engineering work done. According to Mr. Kaercher, the response to this policy has been excellent, and he feels that the public is definitely interested in a place where unbiased information on heating and air-conditioning problems can be obtained.

In 1936, Mr. Kaercher, who was then interested in starting his own engineering office, left the Forest City Foundry Co., and purchased the Central Bureau from Mr. Ferris. Since that time the Bureau has been maintained as an independent engineering office.

### PRICES FOR LAYOUTS

Plans are drawn for winter air-conditioning distributors, manufacturers, architects, owners, contractor-builders, and for other engineers. Complete layouts of winter air-conditioning systems are furnished for a \$3 base price, plus 1 cent per square foot for the ground area of the home or building.

For example, if a two-story colonial house measures 30 ft. x 30 ft. on the ground, and has an area of 900 sq. ft., the charge for complete plans is \$9 plus the \$3 base price, or a total of \$12. Often the Bureau supplies blue prints from one set of drawings to a number of concerns bidding on the same job.

Mr. Kaercher asserts that this method of handling sheet metal layout work makes for economy all the way around. "The average concern only sells about 25% of the jobs bid," Mr. Kaercher says. "Some organization sells every one of the jobs we engineer, and the company getting the job pays us for it, but the concerns who are unsuccessful bidders do not have any engineering expense on the jobs they do not get."

### ARCHITECTS USE BUREAU

In addition to working for manufacturers and contractors, the Central Bureau makes layouts for eight or 10 Cleveland architects. The architects simply ask all interested firms to bid on one set of plans, and include the fee of the Bureau in their bid. In other cases, Mr. Kaercher says, the architect pays the Bureau out of his own fee.

The Central Bureau also approves all winter air-conditioning systems

installed in the city of Shaker Heights, Ohio, which maintains close supervision over all architectural and mechanical details of homes built in the entire community. In this case the Central Bureau furnishes supervision for the entire installation, and gives final approval of the job to the city government of Shaker Heights.

Mr. Kaercher also does work for certain contractor-builders, furnishing them with a complete service, including layout, supervision, and balancing the duct system when the job is finished. In this way, the contractor-builder is assured of getting a satisfactory air-distributing system. Mr. Kaercher states, no matter what heating organization has the contract.

At present the Central Bureau organization consists of two engineers and an office girl, working under Mr. Kaercher. Volume of business has been very satisfactory in the winter air-conditioning field, but Mr. Kaercher believes that his service can be extended to the commercial air-conditioning field in a very satisfactory manner.

### SERVICE TO CLIENTS

"Every air-conditioning contractor knows," Mr. Kaercher says, "that a great deal of engineering expense is wasted on the jobs he does not get. I believe we can assume at least a part of this burden, particularly on sheet metal work, and make one layout for all the air-conditioning dealers bidding a given job. I realize that many air-conditioning systems are sold today on the basis of engineering talent, but at least a portion of the engineering work can be handled by our organization."

"Our acquaintance with the sheet metal trades in Cleveland is broad enough so we can be of assistance to any commercial air-conditioning dealer, by pointing out what class of work can be expected from various concerns. This is just another way in which we can be of service to our clients."

"We also hope to get a certain amount of 'overflow' work from certain firms of architects and mechanical engineers. Every business of that kind has rush periods, when they have difficulty getting experienced men. The Central Bureau is able to assume part of this burden, and this should become an important part of our work."

### TRUST ORGANIZATION

Mr. Kaercher admits that he has been "walking a tight rope," in getting the Central Bureau of Heating and Air Conditioning to the point where it is today. He feels now, however, that winter air-conditioning distributors and dealers in the Cleveland area all trust his organization, and respect the way it is being conducted.

"At first many people felt that we were operating a screen for one of the manufacturers who wanted to get the inside track on all the business in Cleveland," Mr. Kaercher says, "but now the trade has learned that we mean business, and that their prospects are just as safe in our office as in their own."

### Oklahoma Association Now Has 11 Members

OKLAHOMA CITY, Okla.—Eleven contractor-dealers are now enrolled in the Air Conditioning Association of Oklahoma City, reports Albert A. Hoppe, president of the Oklahoma Electrical Supply Co.

## Temperature More Important Than Humidity In Body Reactions, A.S.H.V.E. Members Hear At Convention

(Concluded from Page 1, Column 4)

physical make-up of the worker and his experience in hot industries.

Also concerned with the physiological reactions of individuals to changes in temperature was a paper by F. C. Houghton and W. Leigh Cook, Jr., M.D., "Air Conditioning Requirements of an Operating Room and Recovery Ward," which dealt with research in cooperation with the school of medicine of the University of Pittsburgh and Magee hospital.

The paper concluded that 68 to 69° F. effective temperature constitutes the most comfortable condition for doctors, which is significantly lower than that found best for occupants in general assembly rooms. This bears out the often-repeated statement of the medical profession that the patient can be kept warm during an operation, and that the business of the air-conditioning engineer is to see that the operating physicians and his assistants are comfortable.

That relative humidity has little effect on the skin temperature of the body as indicated by changes in temperature of the fingers and toes, and that "in the zone of body cooling, the dissipation of heat from the body is dependent chiefly on the environ-

mental temperature," was the conclusion reached by Charles Sheard, Marvin M. D. Williams, and Bayard T. Horton, M.D., in a paper entitled "Skin Temperatures of the Extremities and Effective Temperature."

Conclusions reached in this paper tend to correlate with certain studies made last year by C. P. Yaglou, Harvard School of Public Health, who has found that relative humidities had little effect on the function of sweat glands in the skin, and that body comfort was controlled for the most part from temperature. Both of these studies tend to show that too much emphasis has been placed on the relation of relative humidities to physiological reactions to air-conditioning systems.

"Cardiac Output, Peripheral Blood Flow, and Blood Volume Changes in Normal Individuals Subjected to Varying Environmental Temperatures" was discussed by Ford K. Hick, Robert W. Keeton, Harry C. Wall, M.D., and Nathaniel Glickman, M.S.

This study concluded that:

The cardiac output does not rise on the exposure of a resting man to hot conditions until his metabolism rises.

The blood flow through the periphery, particularly the hands, becomes very great as the mean skin temperature approaches the rectal temperature.

The blood volume rises within periods of two or three hours exposure to hot, wet conditions.

Cardiac output is governed by heat production.

The skin temperature can be duplicated from one day to another in controlled rooms, as it is controlled by the delicate mechanism governing heat loss. In the evaporative zone it is partly governed by humidity.

Other papers bearing directly on the medical aspects of air conditioning included "Recent Advances in Physiological Knowledge and their Bearing on Ventilation Practice," by C. E. A. Winslow; "The Role of the Extremities in the Dissipation of Heat from the Body in Various Atmospheric and Physiological Conditions," by Mr. Sheard, Mr. Williams, Grace M. Roth, and Dr. Horton; and "Reactions of Office Workers to Air Conditioning in South Texas," by A. J. Rummel, F. E. Gieseke, W. H. Badgett, and A. T. Moses.

This paper verified the generally accepted theory that the effects of heat are cumulative, and that prolonged hot weather is not accompanied by the usual run-down feeling when relief from the heat can be experienced through the hottest part of each day.



## THIS YEAR PENN CONTROLS ARE THE BEST WE'VE EVER OFFERED

The toughest comparison yet devised for a new Penn Refrigeration Control model is, "Will it do the job better than the controls we have been building?" For, with Penn engineers, it is not enough that a control is new, or just different. It must do the job for which it is designed better than anything previously available in the Penn line.

That's Penn's own performance standard...and those who have used Penn Controls know how high that standard is in terms of performance, long life, simplicity, accessibility, usability. That's why, too, that new Penn Refrigeration Controls aren't just born. It takes time to conceive and deliver to the refrigeration and air conditioning industries, even with Penn's constantly increasing staff of research and development engineers, controls that meet this one stringent requirement.

Even so, during recent months, Penn has introduced new controls and new control models, to broaden the application of our already complete line...to improve the performance and increase the usefulness of refrigeration equipment. Yet, it is not just one new control, but the whole complete Penn line, which stands ready to prove that, "This year, Penn Controls are the best we have ever offered!"

### Look to PENN For Things NEW in Refrigeration Controls

In our complete line you will find controls for every refrigeration purpose—controls that will give your equipment many added years of trouble-free performance. If you have a refrigeration control problem, consult with our engineers. Mail the coupon now for catalog.

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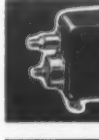
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New Streamline Models for improved performance at lower prices.



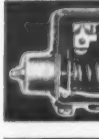
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## Self-Contained Commercial Cases

ACCURATE statistics on sales of commercial refrigeration cases of every classification are difficult to obtain. As a matter of fact, nobody in the industry seems to know what the total sales of display cases, wall boxes, reach-in refrigerators, beverage coolers, and soda fountains were during 1938.

It seems to be a rather generally accepted belief, however, that the proportion of self-contained commercial cases has risen sharply in the past year or so, although it is probably true that self-contained unit sales are still a relatively small percentage of the total. Tom Pendergast of Universal Cooler estimates that only 10% of all commercial installations are self-contained. Harry Newcomb, Servel's general manager, figures that it's close to 20%. Mr. Newcomb points out, though, that probably 40 to 50% of all display cases sold currently are self-contained.

The "packaged" commercial refrigeration idea was pioneered by a number of companies (General Electric, Hussmann, McCray, and Super-Cold are all disputants for the title) several years ago, but it wasn't until 1937 that the idea really caught on. It has always looked like a good idea, but inertia, "rugged individualism," and competitive jealousies combined to keep it from gaining ground.

What dramatized the self-contained commercial refrigeration idea was the resurgence of labor union activity all over the land in 1937. Self-contained units eliminate the necessity of depending on expensive and unpredictable union installers.

### Commercial Men Have Had Experience

As for "rugged individualism," it should be noted that the conservatism of commercial refrigeration distributors is still one of the important factors in retarding the rapid acceptance of self-contained commercial refrigeration. Each commercial department manager or dealer has his own notions as to the best make of compressor, coils, case, valves, and controls.

When he is asked to sell a complete unit, he is often forced to accept parts toward which he has an antipathy due to some past experience. In such cases, it's up both to the complete unit assembler and the various parts makers to do a good selling job on the merits of the various components.

Another reason for the preponderance of separate machine installations is the practice of hooking two or more cases on one machine. It is not uncommon in the big markets, however, to see a battery of self-contained jobs—as many as a half-dozen in a row—installed simultaneously.

In addition to the lower installation costs due to the elimination of union labor, self-contained units also cut costs by reducing the amount of estimating and pre-engineering required. It is also claimed that self-contained units are "better balanced" and, hence, more efficient and economical in operation.

### Improvements Claimed

Further development of self-contained commercial units is also said to be leading to the following improvements:

1. More compact machines.
2. Greater freedom from vibration.
3. Quieter operation.
4. Lighter machines, running at higher speeds, with more efficient lubrication systems, and utilizing motors of lower horsepower.
5. Use of large area, low lift, lighter valves.
6. Lower initial costs.
7. Better eye appeal and "ear appeal."
8. Simpler service requirements.
9. Greater dependability.
10. Reduced warehousing requirements.
11. More complete lines.
12. Greater profit possibilities for both manufacturers and distributors.

### New Markets For Commercial Units

Lower prices occasioned by the self-contained unit also open new markets among the smallest storekeepers, those who previously have been content with hand-carpentered ice chests, or who have been limited to the sale of non-refrigerated foods.

Because there are fewer and better dealers (they are nearly all called "distributors" now, although they buy direct from the factory and sell direct to the consumer) in the commercial refrigeration business, the self-contained idea is likely to continue to gain ground. The days of separate salesmen for machine and case seem definitely over. Most commercial refrigeration distributors now handle everything needed to make a sale and an installation of any description. Consumers now get all equipment from one source; and it seems logical for the retailers to sell "unitized" equipment, even though they may not do all their buying from one source.

Commercial refrigeration is one branch of the industry which doesn't have to "live down" troubles from extravagant promotion and experimentation; and which has steadily continued to offer better service at lower prices. And, incidentally, it is one branch of the industry which has been profitable for all concerned.

## They'll Do It Every Time . . . By Jimmy Hatlo



## LETTERS

### Coin Meters Had Indifferent Success

Glenn Liebig Co.  
Mascoutah, Ill.

Editor:

I am considering the sale of electric refrigeration for homes through coin controlled time clocks. What has been the industry's success with this sales plan?

GLENN LIEBIG, Manager

Answer: From the sales standpoint, coin meters were very successful during the depression but it appears that along about 1936 the various credit plans available in the industry by which payment could be made over a period of as much as three years or more reduced the necessity for a daily payment plan to the minimum.

There were very few coin meters sold during 1936 and 1937, according to all available information, except to large retail furniture and department stores servicing a great number of customers and selling to the lower income brackets.

One coin meter manufacturer recently declared that there was quite an upswing in the use of coin meters by appliance dealers during 1938 as a result of the change of credit terms by finance companies and the need for a small unit payment in the appliance industry.

In general, the tendency seems to be that coin meters find their best use when regular credit terms are short and times are poor and find their least acceptance when times are good and credit terms are long.

We know of but one company in the United States which has made coin meter clocks. Unfortunately, this company brought their clock out at the time the meter idea as a whole was on the downgrade and did not have much success with it (although it looked like a natural at the time). Perhaps the use of a clock meter would help to offset disadvantages of the regular coin meter which is sometimes conspicuous and embarrassing to the housewife.

### Pioneer Work By Bristol

E. T. Williams  
Consulting Engineer  
51 East 42nd St., New York City  
Publisher:

In my letter of Dec. 19 which you have published, I should have mentioned that the development of the thermostat used in the Kneuper soda fountain installation was entirely developed by the Bristol company and was manufactured, not only for us, but for the trade; and, further, Mr. Bristol procured a patent covering it.

However, the original conception of converting the Bristol recording thermometer into a thermostatic switch was entirely Mr. Maltbie's. This development led to a long and close association with Mr. Bristol during which he contributed other types of controls, one of which was a thermostatic switch having a 60-foot bulb extension in which I believe nitrogen was used in the bulb as a thermostatic medium. The connecting tube had a very small cross section and the bore

was further reduced by inserting a wire throughout its length. I believe this 60-foot extension was the longest that had been attempted up to that time.

The device was used in an automatic refrigerating system installed in the Bureau of Chemistry in Washington in 1907 or 1908 for controlling temperature within exceedingly close limits, the variation not exceeding the thickness of a pencil mark on the recording thermometer through months of operation in chambers supplied with outside air through 24 hours of each day while the building was open only 7 hours a day. Mr. Bristol was certainly a pioneer in this field.

E. T. WILLIAMS

### Norwegian Interest In Fruit Storages

General Motors International  
Aldersrogaade 20  
Kobenhavn, Norway

Editor:

In your Dec. 7 number we find mention of a new booklet offering suggestions for design and equipping of refrigerated fruit storages issued by the Portland Cement Association.

We should greatly appreciate the further address of this company or other reference as to where this booklet is obtainable.

A. G. Blom, Manager,  
Frigidaire & Delco  
Answer: Write to Portland Cement Association, 33 W. Grand Ave., Chicago, Ill. for a copy of this bulletin.

### 'Blanket Permission' To Reprint Not Given

Coyne Electrical School  
Chicago

Publisher:

A few years ago you were kind enough to give us blanket permission to reprint (giving of course the usual credit line) from your publication AIR CONDITIONING & REFRIGERATION NEWS.

As an editor, I have always tried to cooperate in matters of this kind and, not knowing just what length of time your reprint permit covers, I am writing you at this time for a renewal of this grant.

Your magazine is considered "tops" in the electrical field by members of our faculty and executive staff.

I will appreciate the continued privilege of reprint from your magazine in our two monthly publications—Shop Talk and the Coyne Graduate News. As you no doubt know, we make no charge for these house organs either to our graduates or industrial concerns throughout the country.

R. A. SNYDER,  
Graduate Manager

Answer: We do not understand your reference to a "blanket permission to reprint" from AIR CONDITIONING & REFRIGERATION NEWS since it is necessary for us to avoid any such authorization in order to insure the validity of our copyrights.

In general, we take a very liberal attitude regarding all requests for permission to reprint when such action does not involve an effort to resell material in competition with our own publications but we invariably ask that such requests specify the particular material to be reprinted and that copies of such reprints be furnished for our files.

As you know, we have had to use some care in granting reprint permission to schools on account of some misuses of material, mainly by extracting headlines, etc., and using them in such a way as to distort the facts and figures regarding the industry.

In your own interest, we urge that you take every precaution to avoid any misuse of material published in the News so that there will be no encouragement to improper promotion efforts on the part of so-called schools without proper facilities and personnel.

### Service Data On Railroad Units

6721 N. Kerby St.  
Portland, Ore.

Editor:

Can you mail me information relating to railroad refrigerating air compressors?

I want a manual on overhauling and maintaining Lipman, Frigidaire, York, General Electric, and Baker compressors.

I also wish parts and numbers if they publish such a manual.

JAS. A. KEATING

### Regional Manager's Opinion

Midwest Mfg. Co.  
Galesburg, Ill.

Sirs:

I look forward each week to the receipt of the News, and read it with interest. I wish to compliment you on your good work in this connection, and want to assure you that I consider the News an important item in the work of everyone who is connected with the refrigeration industry.

W. O. LUTTRELL,  
Regional Mgr., Commercial Div.

### He Took the Advanced Course First

Bartley, W. Va.

Sirs:

Please send me Manual No. 1 of the "Household Refrigeration Series." I enclose \$1.00.

I have the three "Commercial Refrigeration" manuals and have found them to be excellent.

WILLIAM T. MILLER

### Building a Library On Sales Management

R. D. 4, Millvale Branch  
Pittsburgh, Pa.

Sirs:

Enclosed is a check for \$1.00 for which please send me the book "Appliance Selling Today." I am interested in securing additional books on this subject and on the subject of selling and sales management, and would appreciate any guidance you might give in this direction.

E. J. BUSCH

P.O. Box 110, Maryville, Mo.

Sirs:

Find enclosed P. O. money order for \$2.00 for which extend my subscription of AIR CONDITIONING & REFRIGERATION NEWS for six months. Hope I won't miss a copy.

P. J. JANTE



## Specialty Selling Methods

### Prize-Winning 69-Year-Old Salesman Tells His Method of Selling Water Heaters

NEW YORK CITY — A letter written by W. E. Powers, salesman for Northern States Power Co., Minneapolis, on "How I Sell Electric Water Heaters" for the May monthly contest sponsored by Modern Kitchen Bureau has been awarded the grand prize of \$100 as the best letter of the year.

Honorable mention was awarded to two other electric water heater retail salesmen: E. H. Dowson, The United Illuminating Co., New Haven, Conn., and Albert Gruber, The Washington Water Power Co., Kamiah, Idaho, for their constructive letters entered in monthly contests.

Judges in the retail salesmen's contest, one of a series of electric water heater contests conducted by Modern Kitchen Bureau in 1938, were: Fred Shepperd, Electricity on the Farm, Frank B. Watts, vice president of Electrical Publications, Inc., and Lester Moffatt, Editor, Electrical Merchandising.

#### 69 YEARS OLD

One of the unusual things about the letter winning the grand prize for the 1938 series of monthly contests is that it was written by a salesman 69 years old. What is perhaps not so extraordinary is the fact that Mr. Powers has led his company for three years in electric water heater sales. He simply put down on paper the selling procedure that he followed in establishing such marked success.

H. C. Loomis, merchandising manager under whom Mr. Powers works, has this to say of him: "Mr. Powers completely refutes the shopworn theory that 'Industry has no place for the man over 40.' The remarkable record that he has made has encouraged our company to put on other men who are beyond the age most firms think is fit for salesmen."

#### SETS THE PACE

Showing how Mr. Powers sets the pace for younger men, Mr. Loomis says: "After Mr. Powers had been with us a year we started a water heater campaign in November, a month when we usually sell very few. Mr. Powers sold and delivered 43 water heaters in that month. In December he sold 25 more water heaters, although ill part of the time."

Excerpts from Mr. Powers' winning letter, detailing the method he uses in making electric water heater sales, follow:

"THE APPROACH: I have never solicited business over the telephone—depend on personal contact. I never carry a briefcase or anything which in any way would indicate me to be a salesman. Such pamphlets as are necessary are in an inside coat pocket.

"When I step out of my car I try and find something of interest to mention when the door is opened, note the lawn, the trees, make friends with the child or dog on the way to the steps. Those coming to the door have no idea as to whether I am a doctor, a minister, or a process server—they are, therefore, curious to discover.

#### MAKES APPLIANCE SURVEY

"On entering, my first question is, 'have you an electric range?', suggesting that they show it to me. This gets me in the kitchen and I can discover for myself as to whether or not they have refrigeration. I make a business of complimenting them on whatever they have.

"My next question pertains to the electric light bill, the number of

rooms, and the number of people in the house to serve—then I notice and comment on the heating plant and ask if they have a coil in the furnace for heating the water with the usual range boiler, and what method they have when the furnace is out.

"I get all this information in the course of ordinary conversation and make a note of it on one of my appliance cards. Then I remark that I have something to suggest which might prove of interest, a story to tell, a story which induced me to take up the work of making contacts, friends, and introducing electrical appliances.

#### MR. POWERS' STORY

"THE STORY: Hot water is one of the four things necessary in the home—heat for warmth, light that we may see, food that we may eat, hot water that we may keep clean. And it has to be hot, for hot water is the only thing that cuts grease and removes filth.

"Give the cost of hot water 'thought.' Ordinary furnace coils have been used over a long period of years. People pay their coal bill with one idea in mind—it was a cold winter, and they had to keep warm. They never stop to figure what portion of the coal bill furnished the hot water. The idea is to bring to their attention the fact that 1/3 of the coal bill went for heating water.

#### MAKES THEM REMEMBER

"A water coil does not belong in a fire pot, it interferes with the proper combustion of the fuel, creates clinkers, and makes an uneven fire.

"There are five arguments against the coil: First, it costs three to four times as much to heat the water with a coil as it can be heated at the rate of 1 cent per kwh., for electric current at this rate figures the same as coal at \$4 a ton and most people in our vicinity pay \$13 to \$14 a ton for their coal.

"Second, there is 20% less in the fire pot. Third, the formation of scale in the coil itself making necessary its early change or removal. Fourth, the rust formation throughout the tank and water lines produced by the coil. Fifth, the wear and tear on the range boiler because of excessive expansion and contraction in connection with rust formation.

"We figure the average cost of operating the average furnace coil in the average home is about \$2.50 per month, figuring about 1 1/2 tons of extra coal, at say \$13 a ton, for the eight months period in use.

"THE EXPLANATION: Picture an electric hot water heater as a huge thermos bottle—there is no waste heat. We have no heat going up the chimney, no heat radiating into the basement—there is no such thing as cooling, for once hot, it stays hot.

"There is no waste current, for the electric water heater only operates as water is drawn from the system

### He Knows How



W. E. POWERS

sufficient to affect the thermostat control, which immediately snaps on and heats the water back to the point at which the tank is set, then shutting off. It operates like refrigeration—the current being on and off, simply heating the water that is used and heating it at 1 cent per kwh.

"To what is 1 cent per kwh. equivalent? It is coal at \$4 per ton, it is oil at 7 cents per gallon.

#### COST COMPARISONS

"When one stops to think that distillates for use in oil burners cost 7 1/2 to 8 1/2 cents, kerosene 10 to 12 cents, gasoline 18 to 23 cents, 1 cent per kwh. looks cheap.

"In most cases, we find you can pay for the heater and the expense of operating it for what hot water is costing in the average home at the moment, and every cent put in the heater is money saved.

"SUMMARY: Survey calls are necessary. . . . You must first sell to the housewife—and the time for approach is during the day—then to the man—the time to approach is in the evening. You then have the task of selling both and it can be accomplished if you persevere. If you don't make it the first time, try again and again.

#### PROSPECTS REMEMBER HIM

"Within the last few weeks I have sold many an electric water heater to people with whom I have been in touch for a year and a half. My latest call came from a woman with whom I had talked in the spring of 1936. She called at the office and asked me to see her. When I went in I found all of the advertising matter which I had given her in my first interview spread out on the table, and she said she was ready for an electric water heater and regretted not having bought earlier. She had not forgotten my story, nor had she forgotten me.

"I never talk much about the mechanism of the heater until the end of the story—by exhibiting pamphlets I can then demonstrate and bring freshly to light the method of operating before leaving. I find it most important to get acquainted and make friends with the people whom I contact, tell my story in such a way that it cannot be forgotten, bring in personal experiences and anecdotes. . . ."

### One Ironer To Two Washers Is Aim of Dept. Store; Electric Bills, Demonstrations Cut Resistance

BIRMINGHAM, Ala. — Ironers should go with washers just as naturally as ham goes with eggs, and at least one ironer sale should be chalked up to every two washer sales, believes W. L. McAllister, manager of the electrical appliance department of Loveman, Joseph & Loeb, local department store.

Best ironer-to-washer ratio that Mr. McAllister's department has been able to hit yet, however, is one to four. Still, Mr. McAllister has faith in the attainability of his one-to-two goal.

"There are two principal objections offered by prospective ironer customers," Mr. McAllister points out. "First is that electric ironers cost too much to operate, and the other is that the ironer cannot efficiently handle such difficult tasks as ironing collars and steaming velvet garments.

"Eliminate those two objections," he maintains, "and the rest is comparatively simple.

#### USING THE USER

"To prove the economy of the ironers, we show the prospect some of our customers' electric bills before and after purchasing an ironer. These show little or no increase. Then we point out that even if the ironer cost twice as much as a hand iron to operate, it would still be an economy, inasmuch as work can be accomplished three times as quickly with the power unit.

"As for satisfactory operation, it doesn't take long for the demonstrator we keep on our staff to convince a prospect that a shirt can actually be ironed on an ironer in three

minutes, whereas the same job would take about 15 minutes if done by hand. This fact, combined with the various conveniences which the ironer offers, usually is enough to clinch this point."

From time to time, the store uses the souvenir system of attracting customers. These souvenirs, usually consisting of such handy household objects as mixing bowls or cookie sheets, are distributed to likely prospects by the store's outside salesmen.

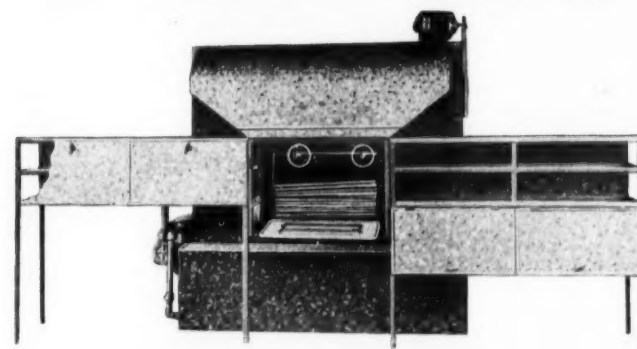
Though putting a good deal of faith in the efficacy of demonstrations on the sales floor of the appliance department and also at other strategic spots throughout the store, the company discourages outside demonstrations of washers and ironers.

#### HOME DEMONSTRATIONS

Occasionally, however, when a prospect has witnessed a floor demonstration, has selected the model she desires, and has had her credit rating thoroughly checked, the store relaxes this policy and allows a washer or ironer to be sent out to her home for an on-the-spot trial. A demonstrator always goes along to offer any assistance possible, and to see that the unit is used properly.

The store has found that about 98% of these home demonstrations result in sales, primarily because each prospect is thoroughly qualified as "A-1" before the demonstration ever is agreed upon. If the demonstrator can close the deal without the assistance of a salesman, she receives 2% of the commission. In the rare cases in which a customer decides not to go through with the deal, the unit is picked up within 24 hours.

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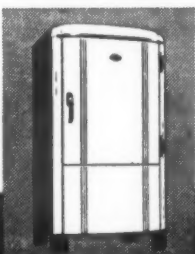
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## Merkel Explains How Jobbers Came Into Being, Where an Association Is Helpful, And Trade Problems That Need Solving

By Henry W. Merkel, President  
National Refrigeration Supply Jobbers Association

As a preface to this report, I think it well to briefly outline the history and functions of the business we are engaged in. As a result of fairly extended research, I find that, as recently as 1930, the refrigeration supply jobber was practically non-existent.

Prior to that time, there was no single source from which the refrigeration trade, i.e., those who sell, install, and service refrigeration equipment, could obtain the materials required for their everyday requirements. This necessitated purchases from a considerable number of sources, many at distant locations with consequent delay, inconvenience, and expense, not only to the trade but to the ultimate user.

Out of an uneconomical situation of that kind was bound to come a logical solution. Through actual request and suggestion from the refrigeration trade coupled perhaps with some initiative, a few organizations here and there began to assemble a line of refrigeration supplies to fill this demand.

### TRADE SOUGHT JOBBERS

In those early days, the jobber did not seek out the trade; the trade sought a source of supply that could furnish from a single stock at least the material needed for its immediate requirements. The jobber, incidentally, experienced difficulty in finding sources of supply which were willing, we might say, to take a chance on this new and untried method of distribution. The jobber's stock therefore was slowly built up.

Indicative of the recent advent of the jobber is for example, the 1932 catalog of one of the first parts manufacturers to become jobber minded. Their catalog issued in the fall of 1931 listed seven jobbers as distributors of their product. The 1933 catalog of the same manufacturer listed 18 jobbers. It is safe to say that several times that number of jobbers are today purchasing from this manufacturer.

Other manufacturers, who at first were skeptical of distribution through a jobbing channel, rather quickly revised their opinions so that today the qualified jobber has willing sources of supply for practically all products required for the regular and even quite special requirements of the trade. The fact that in the

beginning the refrigeration supply jobber entered the business largely in response to a demand from the refrigeration trade for a central source of supply definitely testifies to the value and need of the service the jobber provides.

Now, let us very briefly consider the functions exercised by a representative jobber. He purchases his stock requirements from upwards of 40 different manufacturers and carries in stock upwards of 1,500 refrigeration items. He collects these into one stock and there has them available for immediate delivery. They include a large majority of the items required for the day-to-day needs of the refrigeration trade. In addition, he has available information and can give prompt service on more or less special or unusual items, required only occasionally.

### JOBBER IS ANSWER

The jobber in turn sells these items to several hundred customers—in some cases to thousands. This requires the services of salesmen, counter clerks, stock and order taking personnel, office personnel for pricing, billing, correspondence, and accounting. Training and study are required to acquire knowledge of many of the products handled to intelligently serve and in turn transmit the right information to the trade.

In order that refrigeration supplies and parts reach the various factors who sell, install, and service refrigeration equipment, some scheme of distribution is necessary. The advent of the jobber, as previously outlined, apparently was in answer to that requirement. No matter what scheme of distribution is followed by a manufacturer, its cost must be borne by someone.

Distribution through the jobber involves two steps: Material moves from the supply and parts manufacturer to the jobber and from the jobber to the various refrigeration trade elements. Each jobber furnishes sales representation, warehousing, and distributing facilities for each of the 40 or more manufacturers whose products he handles, and for each of these manufacturers he contacts hundreds of users of each of the manufacturer's products.

Granted that a jobber salesman may not be as well qualified to present any one manufacturer's product

as well as the manufacturer's salesman who is a specialist, I think, however, it will be conceded that except in isolated cases it is economically impossible or at least economically prohibitive for each of the 40 or more manufacturers to individually contact and serve each of the host of customers or possible users of his product with the necessary frequency and continuity that is so essential to the successful merchandising of any product.

### CUTS COSTS

That would involve duplication by each manufacturer of the functions performed by the jobber with an intolerable increase in sales expense and price of product. Likewise, the addition of more links in the chain of distribution incurs additional expense which must be borne by someone, either the manufacturer at the beginning of the chain, or the ultimate customer at the end of the chain.

In an association of as recent origin as ours, and especially in an association serving an industry of as recent origin as ours, there are so many problems to be considered that it is difficult to select not those that are our greatest problems but rather those that are necessary of solution as a preliminary step to an orderly progress and effective consideration of the more major problems. Obviously one of the first problems of any association in any industry is that of recruiting a representative membership, of holding the members it is able to enlist, and of raising funds sufficient to finance such activities as are undertaken.

It is fitting, therefore, that I tell you that approximately 85% of our members of a year ago are today loyal and active members in good standing in our association. In other words, the names of 15% of the jobbing establishments which appeared a year ago in our official directory will not appear in the one we will publish this year.

### CAUSES OF SHRINKAGE

This shrinkage has been occasioned by three circumstances—(1) bankruptcy or liquidation; (2) merger or sale to another company; and (3) resignation. The number of resignations has been exceedingly small but the causes for them are quite significant.

One of our largest member companies which was not present at our convention a year ago resigned because of the increase to it occasioned by the graduated scale of dues adopted for this year. Practically all of the other resignations seem to have come from small companies who had been able to obtain recognition as jobbers from a sufficient number of manufacturers (usually not the most representative

## The Place of the Parts and Supplies Jobber

Wholesaling of refrigeration and air-conditioning parts and supplies by firms specializing in the business is a relatively new phase of the industry's distributive setup. Not a great deal of study or publicity has as yet been given to this end of the business. There are many people within the industry who are still not sure what constitutes a parts jobber's functions.

At the convention in January of the National Refrigeration Supply Jobbers Association two addresses were given which give a fairly thorough picture of what place the jobber fills. The presidential address of Henry W. Merkel is published in this issue. The keynote address of A. H. Holcombe, Jr., will appear in full in next week's issue.

manufacturers in the industry) to qualify for membership in our association.

Having succeeded in becoming members they apparently used their membership in our organization to secure recognition as jobbers for the more representative products. Having procured these lines they felt our association had served its usefulness as far as they are concerned and hence dropped out.

It's needless for me to say that your officers and the members of your board of directors are wholly unsympathetic with such a practice and I might here add that great care has been taken by your board this year in passing upon the applications of all persons seeking admission to our association. We have adhered strictly to the qualifications for membership as set forth in our by-laws. As a consequence, we believe that every jobbing establishment admitted to membership this year adds strength to the industry and to our association.

I am pleased to report that we have obtained enough such new members to a little more than offset the number we lost during the year. We have not, however, been able to add nearly as many new members as we had hoped a year ago. This has been hard on our treasury. We have lost the income from nearly a dozen less companies than we confidently expected that we could add to our membership during the year. As a result our income has fallen more than \$1,000 under the budget adopted at our annual meeting a year ago, but we have lived within our income.

### FINANCE PROBLEMS

One further word on the subject of income seems to be in order. You will recall that prior to last year, we operated on a straight flat fee basis. Last year you approved a schedule of dues on a graduated dues basis—a basis in which the dues of some of our member companies were increased from 500% to 600%. These payments have been made cheerfully by our members in the belief that without funds it isn't possible to accomplish much.

In view of this attitude and out of our experience this year, it appears that we have arrived at an equitable basis and level of dues. It's a pleasure, I assure you, to be able now to say that you need have no fear of a motion later in our sessions for a further increase in our present dues structure.

Next to the question of membership and finance in importance in a trade association are adequate contacts—means of communication, if you please. This is doubly important

in a national organization, with a far flung membership such as we have.

As you are aware, your directors authorized the establishment of a confidential new bulletin entitled "The Month's Work" to go out at regular intervals. This step was taken not only to provide the association with a means of keeping our members informed regarding matters of interest to all but also to offer the members themselves an opportunity to contribute to its pages. We have been pleased with the number of members who have taken an active part in helping our editor to make this

(Concluded on Page 17, Column 1)



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## Direct Activities of National Supply Jobbers Association



Affairs of the National Refrigeration Supply Jobbers Association for the next year are in the capable hands of these officers and directors, elected at last week's annual meeting in Chicago.

Seated, left to right: F. H. Langsenkamp, Jr., F. H. Langsenkamp Co., Indianapolis, vice president; Leo H. Gorton, Machine Tool & Supply Co.,

Tulsa, Okla., president; H. W. Blythe, H. W. Blythe Co., Chicago, secretary-treasurer.

Standing, left to right: Directors Clarence F. (Sandy) Pratt, California Refrigerator Co., San Francisco; Howard H. Hubbell, Brass & Copper Sales Co., St. Louis; D. C. Lingo, D. C. Lingo Co., Houston, Tex.; L. H. Roberts, Forslund Pump & Machinery

Co., Kansas City, Mo.; Henry W. Merkel, The Merkel Bros. Co., Cincinnati; Arnold Dessau, Melchior, Armstrong, Dessau Co., New York City; A. H. Holcombe, Jr., Victor Sales Corp., Philadelphia; and C. E. Borden, A. E. Borden Co., Boston.

Mr. Dessau later resigned to make way for the election of T. W. Binder of the T. W. Binder Co., Newark, N. J.

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CLEVELAND OHIO, U.S.A.



# Locker Storages

## Vapor-Proof Warm Side & Let Cold Side Breathe To Colder Air, In Construction of Storage Rooms, Says Insulation Engineer

CHICAGO—In the construction of refrigerated rooms for locker storage plants, pre-coolers, food and fur storages, or bakery dough retarder and yeast storage rooms, vapor-proof the warm side and let the cold side breathe to the colder air.

This principle for increasing efficiency and lowering operating cost was given Illinois Refrigeration Service Engineers at their winter meeting here by Willis M. Rees, insulation engineer for United States Gypsum Co.

"The past few years have seen some very great changes in the design and construction of refrigerated rooms," Mr. Rees said. "These changes have in most cases meant considerable reduction in the cost, and a greater assurance against the accumulation of ice or water within the construction."

"Methods applied to cold room construction today make use of principles of moisture behavior which have long been known to the refrigeration engineer. It is the behavior of moisture in moving from warm to cold areas. The refrigeration engineer sees evidence of this in his everyday experience."

"Cold air, being dry air due to its inability to hold moisture, thirsts for moisture and draws it from every source it can. In the electric refrigerator, the cooling coils collect and freeze the moisture from the air around them."

### WHAT IS REQUIRED

"The refrigeration engineer has great concern for the construction of the rooms in which his refrigerating equipment is installed, for three main reasons:

"1. It must have low heat transmission so that the refrigerating equipment will be economical to operate. All heat passing into the cold room from the warmer exterior areas must be absorbed by the refrigerating equipment, so the desired temperatures can be maintained."

"2. The room must be so constructed that it efficiently prevents the leakage of water vapor through walls, floors, and ceilings into the cooled area, as moisture brings heat with it that must be absorbed. Excess moisture leaking into the room to be cooled means larger refrigerating equipment to handle the excess load the moisture necessitates. The boundaries of a room may be efficient in excluding conducted heat, but may still readily permit moisture to enter through them. A properly designed room should efficiently retard the in-leakage of moisture as well as conducted heat."

"3. Construction of the room should be such that the walls, floors, and ceilings do not accumulate water or ice, which increases the conductivity of heat into the room. The refrigeration engineer as well as his customer wants assurance that the equipment will continue to operate as efficiently over a long period as it does at first."

### THE PRINCIPLE

"Principle of construction that should be applied to meet the above requirements can be stated very simply: 'Vapor-proof the warm side, and let the cold side breathe to the colder air.' Most materials of construction, even though air-tight, may be porous to the movement of water vapor, and will 'breathe.' However, this very fact makes necessary the careful consideration of the materials to be used on the warm side of a wall, floor, or ceiling, as they must be both air-proof and vapor-proof."

struction, even though air-tight, may be porous to the movement of water vapor, and will 'breathe.' However, this very fact makes necessary the careful consideration of the materials to be used on the warm side of a wall, floor, or ceiling, as they must be both air-proof and vapor-proof."

### FRAME CONSTRUCTION

"For reasons of economy, ready availability of materials, and simplicity of applying the correct method of construction, a frame construction using fill types of insulation is suggested."

"Dimensions of the framing members are determined by their structural requirements and the thickness of insulation needed. For most rooms with temperatures of 30° F. or higher, 2 x 4 framing members are satisfactory, as they meet the structural requirements and permit the use of about a 4-inch thickness of insulation between them."

The following or similar materials are known to be good vapor barriers, Mr. Rees said, and should be used on the warm side of the structural members:

### VAPOR BARRIER MATERIAL

1. Light-weight asphalt roll roofing.
2. Asphalt impregnated and surface coated sheathing paper, glossy surface, weighing 35 to 50 lbs. per roll of 500 sq. ft.
3. Laminated paper made of two or more sheets of kraft paper cemented together with asphalt, 30-60-30 grade.
4. Aluminum foil mounted on paper.

If a building paper is to be used on the cold side of a construction, it should be vapor porous, he advised.

"When constructing a wood frame cold room," Mr. Rees continued, "the warm sides of the frame work should be covered with one of the above named vapor barriers, covered with some type of boarding to protect it against damage. The space between the framing members should be filled with insulation."

"The cold-side face of the walls, ceilings, or floors can be any standard construction which is vapor porous. For most uses, wood is recommended, as it permits the ready attachment of wiring, pipe lines, hangers, etc. For walls and ceilings square-edge lumber

is suggested, with about a 1/8-inch space between each board."

The above construction complies with requirements, he said, in that:

1. It permits adequate control of heat conductivity of the construction, as efficient insulation can be used in required thicknesses.

2. The use of an adequate vapor barrier on the warm side of the construction is effective in stopping air leakage in or out of the room, and preventing the entrance of moisture into the room.

3. With a vapor barrier on the warm side of the construction, moisture is effectively kept out of the insulation, and the vapor-porous construction on the cold side permits a continuous dehydration of the insulation, giving the best assurance possible that the insulation will continue to function at maximum efficiency.

The insulation material should meet the following requirements:

Have high heat insulating efficiency.

Be low in cost.

Be readily available.

Be fireproof.

Should not absorb nor give off odors.

Should not be attractive to rodents or vermin.

Should not absorb nor retain dampness.

Should not be affected by moisture. Should be in a form easily and economically installed.

"Remember to use an efficient vapor-barrier on the warm side of a cold room construction, and let the cold side breathe to the cold air," he reiterated, in conclusion. "Many years of actual experience and thousands of dollars worth of research, have shown this to be the correct method."

## Length of Time Meat Can Be Stored Not Fully Determined

Metropolitan Life Insurance Co.  
New York City

Editor:

At the present time I am making a study of the physical, chemical, and bacteriological changes that take place in meats, such as beef, pork, and lamb after it has been held in cold storage for a period up to one year.

It has been suggested that your research bureau would be able to supply me with charts, figures, or other data showing the percentage of shrinkage (by grade) that takes place in meat when it has been held in storage three, six, nine, and 12 months, and for periods beyond 12 months.

Can you, at the same time, advise what your experience has been with regard to wholesomeness, palatableness, edibility, and food value after meat has been in cold storage longer than six months.

Any information you can give me relating to the above will be greatly appreciated.

ALFRED H. GOOD,  
General Purchasing Agent

Answer: We referred your inquiry to the Institute of American Meat Packers, Chicago, and received the following comments from the director of the Institute's Department of Packinghouse Practice and Research:

"I doubt whether there are any figures of value indicating the percentage of shrinkage taking place in

meat held in storage for periods varying from three to 12 months. There are so many variables which have a bearing on shrinkage that comparable figures are hard to develop."

"I doubt very much whether meat stored for six months is less wholesome or has less food value than fresh meat, nor is such meat less edible if properly handled. The palatability of some frozen cuts is a matter of question. I am assuming, of course, that the inquirer is referring to the storage of this meat in the frozen form."

It is suggested that you might wish to write to the institute for further elaboration or comment on this matter, and that you might also find something of interest in the book, "Meat Through The Microscope" by C. Robert Moulton, published by the University of Chicago Press.

It is also possible that you might obtain some material from the Engineering Experimental Station at the University of Tennessee, which has been making some extensive studies on problems involved in the storage of food.

### Tennessee Plans

NASHVILLE, Tenn.—Plans are being made for the construction of an \$11,000 cold storage locker refrigeration plant for Brentwood and surrounding territory by a committee under the direction of Henry Dickinson, chairman. The plant will have a capacity of approximately 300 lockers.

Stock totaling \$5,500 has been subscribed, and an application for government aid will be made, Mr. Dickinson said.

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The secret of its performance lies in the snap-acting precision switch which has no "dead center." This switch can be mounted in any position and is not affected by vibration. Operation is consistent. There are no bearings or pivots in this control to bind and delay switch action. This new A-B control is a self-

contained unit, ideal for mounting in control assemblies. It is extremely flexible and units can be mounted in any combination, in any position. Switch operation is not affected by rough handling or strains to which the enclosure may be subjected.

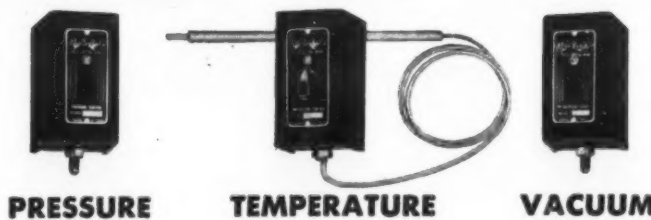
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Close-up of PRECISION SWITCH of a Bulletin 836 Temperature Control with bakelite switch cover removed. This control is equipped with a knob for external adjustment.

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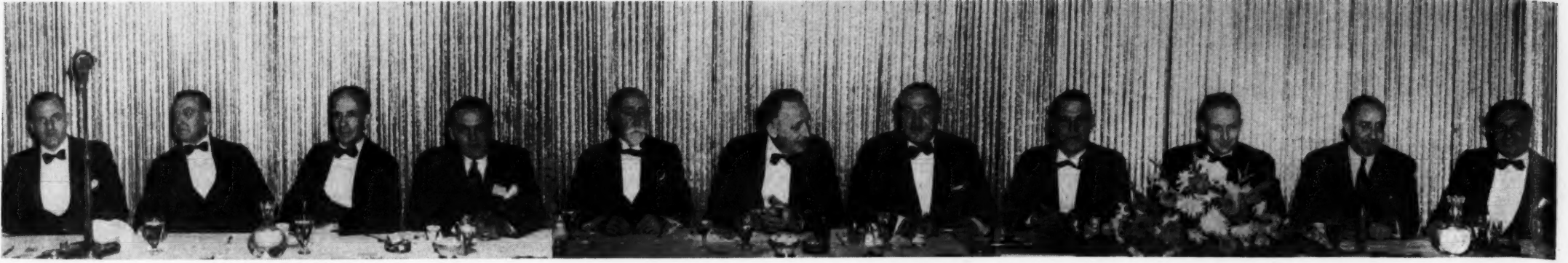
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# All Branches of the Refrigeration Field Represented at First All-Industry Banquet



COLYER POOLE COCKRELL BRUNTON NICKERSON HIGLEY THORNDIKE JOHNSTON LUSCOMBE GAMMIE DASKAL

The speaker's table at the First All-Industry Refrigeration and Air Conditioning Banquet held in Chicago, Jan. 16. (From left to right) J. D. Colyer, vice president of Wolverine Tube Co., retiring president of the Refrigeration Supplies & Parts Manufacturers' Association and toastmaster of the Banquet. Gardner Poole, vice

president of General Foods, Inc., president of the American Society of Refrigerating Engineers, who gave the principal address at the Banquet. F. M. Cockrell, publisher of AIR CONDITIONING & REFRIGERATION NEWS, who called the initial meetings at which the jobbers and manufacturers associations were organized, final

speaker on the program ("A Toast to the Refrigeration & Air Conditioning Industries," published in the News, Jan. 18). Claude Brunton, president of the Refrigeration Service Engineers Society. J. F. Nickerson, president of Nickerson & Collins Co. and "father" of the service men's society. H. V. Higley, president of Ansul Chemical

Co. and vice president of the Manufacturers Association. K. B. Thorndike of Detroit Lubricator Co., a director of the Mfrs. Association and chairman of the Publicity Committee. Charles W. Johnston of Virginia Smelting Co., director of the Mfrs. Association. R. H. Luscombe, sales

manager of Penn Electric Switch Co. and a director of the Mfrs. Association. Edward Gammie, sales manager of Victor Gasket & Mfg. Co. and a director of the Mfrs. Association. D. H. Daskal, president of Perfection Refrigeration Parts Co. and a director of the Mfrs. Association.



RILEY OBERC LEONARD McCLURE McDERMOTT MERKEL (See note below) KNIGHT Mrs. KNIGHT FORBES WOOD

NOTE: The lady is Mrs. W. A. Honeychurch and the man standing is Henry W. Merkel, who appears in the picture a second time due to an oversight in patching together a number of closeup pictures to make the above panoramic effect of the long head-table at the banquet.

F. B. Riley, president and general manager of Riley Engineering Co. and a director of the Manufacturers Association. J. M. Oberc, Detroit jobber, one of the founders of the National Refrigeration Supply Jobbers Association. W. A. Leonard, general manager

of Imperial Brass Mfg. Co. and a director of the Mfrs. Association. R. M. McClure, executive secretary of the Mfrs. Association. H. T. McDermott, executive secretary of the Service Engineers Society. Henry W. Merkel, Cincinnati jobber and retiring presi-

dent of the Jobbers Association. Mrs. W. A. Honeychurch, member of the Women's Entertainment Committee for the Exhibition. M. W. Knight, sales manager of Peerless of America, Inc. and chairman of the All-Industry Exhibition Committee. Mrs. Knight,

chairman of the Women's Committee. J. S. Forbes, president of Superior Valve & Fittings Co. and new president of the Mfrs. Association. Campbell Wood, public utility representative of Nash-Kelvinator Corp., who demonstrated his ability as a "pinch-hit"

speaker by appearing on short notice in place of the scheduled speaker, Henry W. Burritt, vice president of Nash-Kelvinator Corp., whose home was destroyed by fire the day before the banquet.



(Left) Commercial Coll & Refrigeration Co. table. Dorothy Gillies; R. M. Gauger; Mrs. G. E. Gauger; G. E. Gauger; Mrs. Louis Santoro; Louis Santoro; Mrs. A. T. Stock; A. T. Stock. (Center) Engineers from many

branches of the industry at this table. L. W. Childs, Evans Products Co.; W. T. Heaney, American Refrigerating Co., Detroit; R. A. Wittman, Peoples Gas, Light & Coke Co., Chicago; W. E. Henning, Penn Electric

Switch Co.; L. B. Miller, Minneapolis-Honeywell Regulator Co.; Charles Neeson, Airtemp division, Chrysler Motors; A. B. Newton, Minneapolis-Honeywell Regulator Co. (Right) Around the table from left

to right are C. E. Borden, A. E. Borden Co., Boston jobber; M. R. Oberholzer, L. H. Gilmer Co.; Irving Knudson, Detroit Lubricator Co.; Leo Gorton, Machine Tool & Supply Co., Tulsa, Okla.; F. E. Wilson, Brunner

Mfg. Co.; Joe Simons, Marsden & Wasserman, Hartford, Conn. jobber; W. A. Siegfried, Kerotest Mfg. Co.; Bob Sheperdson, Standard Supply Co., Worcester, Mass.; Art Wasserman, Marsden & Wasserman.



(Left) Facing the camera are F. E. Morley, New Haven, Conn.; C. P. Williams, L. H. Gilmer Co.; D. C. Lingo, D. C. Lingo Co., Houston, Tex.; C. P. Payson, C. P. Payson Co., Springfield, Mass.

(Center) A Canadian delegation. From left to right around the table, starting with the man whose back is to the camera, are C. O. Cunningham, Kelvinator of Canada; Roy Kemp, Canadian Curtis Co.; F. G. Mc-

Cracken, Wagner Electric Co. of Canada; F. C. Hosmer, Wagner; Frank Eversden, Kerotest; C. H. Anderson, Wagner; James Gibson, Winnipeg Refrigeration Co.; F. A. M.

Dawson, Refrigeration Supplies, Ltd., London, Ontario.

(Right) Standing is R. E. Mercer, Brunner Chicago representative; then

left to right around the table are Jim Kantor, Liquid Carbonic Corp.; Ernest Gygax, Curtis Refrigerating Machine Co.; B. J. Scholl, Brunner Mfg. Co.; Charles Gibson, United Cork Co.; R. H. Reinhardt, Carrier Corp.



(Left) The gray-haired gentleman bending over his soup is Walter Mott, veteran refrigeration engineer. At his left are Sam Bloom, E. G. Applegate, R. S. Barber, and J. L. Patrick, at a

table filled with well-known Chicago refrigeration engineers.

(Center) Standing is W. D. Ambrose, Mills Novelty Co. service manager. On his right is George Tigar, Tigar

Electric Co., Chelsea, Mass.; on his left are V. S. Loy, R. S. Seddon, and J. O'Connor, all of Mills.

(Right) Reading from left to right are E. M. Mittendorf, Sarco; C. L. Elchstaedt, Curtis Refrigerating Ma-



chine Co.; H. C. Morrison (standing), Curtis Refrigerating Machine Co.; George H. Dickerson, national president, Heating, Piping & Air Conditioning Contractors Association; Kaj Aage Hartvig-Hansen, refrigerating

engineer from Copenhagen, Denmark; E. F. Vilter, Vilter Mfg. Co.; A. B. Stickney, Armour & Co. refrigeration engineer; Ernst Baars, Vilter Mfg. Co.; R. E. Anderson, National Korectaice Co.



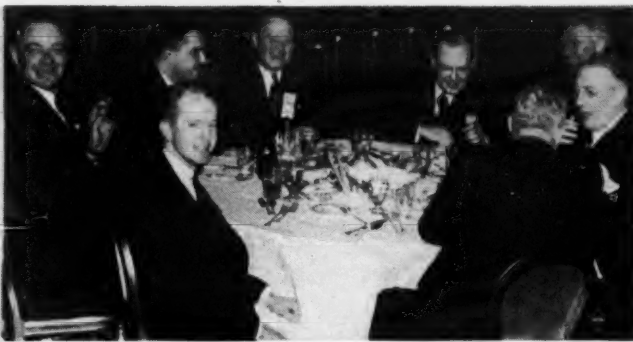
# Some of the Socializing Exhibitors and Visitors at the Show



(Left) Mrs. J. J. Kline; J. J. Kline, Springfield, Ill., service engineer; Mrs. E. H. White; E. H. White, Elgin, Ill., refrigeration service engineer; Mrs. J. B. McGuan; J. B. McGuan, Automatic

Heating & Cooling Supply Co., Chicago; Willis Stafford, Aurora, Ill., service engineer.

(Center) Around the table are J. D.

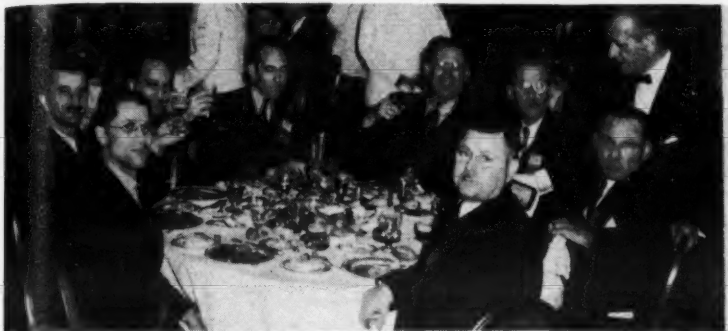


Prendergast, United Wire & Supply Co.; R. T. Carrithers, AIR CONDITIONING & REFRIGERATION NEWS; E. B. Dunphy, Acme Industries, Inc.; H. W. Ditt-

meyer, United Wire & Supply Co.; Howard Hubbell, Brass & Copper Sales Co.; Paul Revere, Revere Copper & Brass.



(Right) Gene Enos, H. A. Norr, and F. W. Simmering, all of Portable Elevator Mfg. Co.; W. C. Duncan, Memphis, Tenn.; B. W. Rist and R. S. Dawson, Alco Valve Co.



(Left) Jobbers from the east meet manufacturers' representatives from the Rockies. A. H. Holcombe, Jr., Victor Sales Corp., Philadelphia; S. Sachs, Perry Metals Co., Brooklyn;

Irving Sussman, County Seat Plumbing Supply Co., Mt. Vernon, N. Y.; J. D. Sullivan, R. A. Murdock, F. J. Baumeister, and J. L. Whalen, all of Gates Rubber Co., Denver, Colo.; T.



W. Binder, T. W. Binder Co., Newark. (Center) An all-Peerless table. Mrs. Carl Johnson; Carl Johnson; Mrs. A. F. Hoesel; A. F. Hoesel; Edwin H. Bockmeyer; Alice Gebhart; M. E.

Miller; L. J. Pitcher; Mrs. Pitcher; Walter Boysden. (Right) E. S. Hildreth, Indianapolis Power & Light Co. and secretary of Indianapolis Air Conditioning Council;

Mrs. F. S. Langsenkamp, Jr.; F. S. Langsenkamp, Jr., Indianapolis jobber; E. J. Kimm, Kerotest; a lady we can't identify; R. E. Spangler, St. Louis; J. S. Strachan, Kerotest.



(Left) The gentleman exposing his handsome profile is H. E. Rieckelman, Fedders Mfg. Co. Around the table to his left are Israel Kramer, Trenton Auto Radiator Co.; W. C. Parker,

Hasco, Inc., Greensboro, N. C.; M. J. Trautman; Mrs. M. J. Trautman; F. R. Pond; Mrs. P. O. Jones; L. G. Seebach; G. J. Nieland; F. D. Helms; and E. W. McGovern.



(Center) Prominent refrigeration engineers graced this table. Ben Seamon; T. J. Vollman; George Bright; Deane Perham; E. B. Utescher; C. W. Gilmore; E. W. Barger; Walter

Kuenzli; H. R. Halterman; and James E. Petermann. (Right) Al Fine, Kerotest; C. L. Hartman, Rock Island, Ill. dealer;

Mrs. Hartman; Fred Tindall, Tindall's Service Shop, Moline, Ill.; E. L. Bengston, Republic Electric Co., Des Moines, Iowa; J. W. Krall, Detroit Lubricator Co.



(Left) The Pacific Coast boys stick together even if they're two thousand miles from home. R. W. Losey, Zenith Carburetor Co.; M. B. Heffler, Zenith; Merle G. Haynes, Pacific Factors, San

Francisco; J. Wilderman, Wilderman Refrigeration Co., Seattle; Peter Askew, Refrigeration Supply Distributor, Los Angeles; F. W. Gillett, Frank W. Gillett Co., Los Angeles.



(Center) H. K. Pride, Minneapolis-Honeywell Co.; R. W. Qualley; Mrs. F. M. Cockrell, wife of the publisher of AIR CONDITIONING & REFRIGERATION

News; John Park, the News; Helen Cockrell, daughter of F. M. Cockrell; T. Ellis and J. P. McShane, Swift & Co. (Right) Virginia Smelting Co. table.

Jean Hudgins, W. C. Dever, Margaret Blanchard, R. H. Israel, Robert LeBaron, F. W. Binns, and Marjorie Campbell.



(Left) J. G. Moravec, Penn Electric Switch Co.; Charles Knox, Baker Ice Machine Co.; J. F. Reynek, Burge Ice Machine Co., Chicago distributor; E. R. Burge; F. C. Burk, Henry Bolt Co.;

W. E. Lloyd, Acme Industries; W. L. Lynch, Rome-Turney Radiator Co. (Center) W. C. Parker, Hasco, Inc.; Mrs. P. O. Jones, United Supply Co., Omaha, Neb.; F. R. Pond, Refrigeration



Independent Supply Co., Minneapolis; Mrs. M. J. Trautman; M. J. Trautman, Refrigeration Supply Co., Washington, D. C.; J. S. Forbes, Superior Valve & Fittings Co.

(Right) Mrs. U. C. Boyles; U. C. Boyles, Refrigeration Supply Co., Dallas, Tex.; A. R. Morin, Macklamburg Brass & Copper Co., Oklahoma City, Okla.; Horace Schmidt, Fedders

Mfg. Co.; Joe Mideke, Mideke Supply Co., Oklahoma City, Okla.; R. L. Williams, Mideke Supply Co., Oklahoma City, Okla.



(Left) Chase Brass & Copper Co. representatives. F. H. Barton, W. L. Brown, B. R. Classen, H. H. Bartless, and T. J. Bold.

(Center) G. W. Taylor, Kerotest Mfg. Co.; A. S. Kingerly, Wolverine Tube Co.; Frank Houston, Detroit engineer; Karl Agricola, Fredericksen



Co.; E. H. Davey, J. M. Oberc, Inc.; Mrs. J. M. Oberc; H. F. Mehaffie; P. Tazelaar, Commonwealth Brass Corp.

(Right) Facing the camera are A. A. Hadden of the firm of Ortman, McClure & Hadden, management engineers; Irving Alter, the Harry Alter

Co.; Mrs. Alter; Clarence F. (Sandy) Pratt, the California Refrigerator Co., San Francisco jobber.



## Commercial Service

### Hook-Up & Operation of Controls In 1935 Carbonic 'F-12' Fountain Described

**Editor's Note:** The introduction of Freon-12 in soda fountain use in 1935 necessitated the use of more accurate and positive controls for the ice cream section of soda fountains. In describing the "1935 Liquid Carbonic" system, Messrs. Black and Seitz explain the wiring and operation of the controls.

This is a continuation of the series of articles on the servicing of soda fountains and allied products which is appearing weekly in AIR CONDITIONING & REFRIGERATION NEWS.

By Arch Black and Dean C. Seitz

#### Freon-12 Used In 1935

Up to the year 1935, it had been common practice in the soda fountain industry to control the operation of the condensing unit entirely by means of the low-pressure switch on those fountains in which sulphur dioxide was used as the refrigerant. Reasonably close temperature control was obtained, and until Freon-12 was adopted by several manufacturers in 1935, no auxiliary controls had been found necessary.

However, starting in 1935 and occasioned by the use of Freon-12 refrigerant, a more accurate and positive control of the temperature in the ice cream section of the soda fountain was developed.

The development consisted of a separate thermostatic switch usually furnished by the soda fountain manufacturer to control the temperature in the ice cream section only. It is connected in parallel with the low-pressure switch supplied with the condensing unit which controls the

water cooling and jar enclosure temperature. The auxiliary thermostatic switch is either attached to the exterior end of the creamer unit or shipped as a separate part, in which case it must be properly mounted and wired by the installer of the soda fountain.

Fig. 1 illustrates a typical thermostatic switch showing the interior construction. Bear in mind that this thermostatic switch does not replace the low-pressure switch but is used as a separate thermostat wired in parallel with the standard condensing unit low-pressure switch.

Installation and service details of this auxiliary thermostatic switch will be given in later articles with reference to their use as applied to the respective manufacturers' soda fountain.

#### 1935 Liquid Carbonic Refrigeration Hook-Up

The 1935 Liquid Carbonic soda

fountains were equipped as standard with boilers and control valves for Freon-12 refrigerant. However, since sulphur dioxide soda fountains were likewise available, on special order, the service engineer should check which refrigerant was used before starting any service operation.

Fig. 2 illustrates both the refrigeration hook-up and the electrical wiring diagram for the 1935 Liquid Carbonic hook-up. In the ice cream brine tank, a standard Freon-12 boiler is used, directly connected to the condensing unit. Likewise in the water bath section a standard Freon-12 boiler is used.

The amount of ice formation built up on the sweet water bath boiler (A) is controlled by means of the temperature regulating valve (B) which is placed in the suction line leading from the water bath boiler.

The original 1935 fountains were fitted with a temperature regulating valve, model TRV30, which was replaced at a later date by model TRV20. The thermostatic bulb which controls the temperature regulating valve is fastened to the boiler by means of a clamp which holds the bulb approximately 1 inch from the boiler.

This temperature regulating valve should be adjusted so that approximately  $\frac{1}{2}$  inch of ice will form on

Fig. 2—'1935 Liquid Carbonic' System Controls

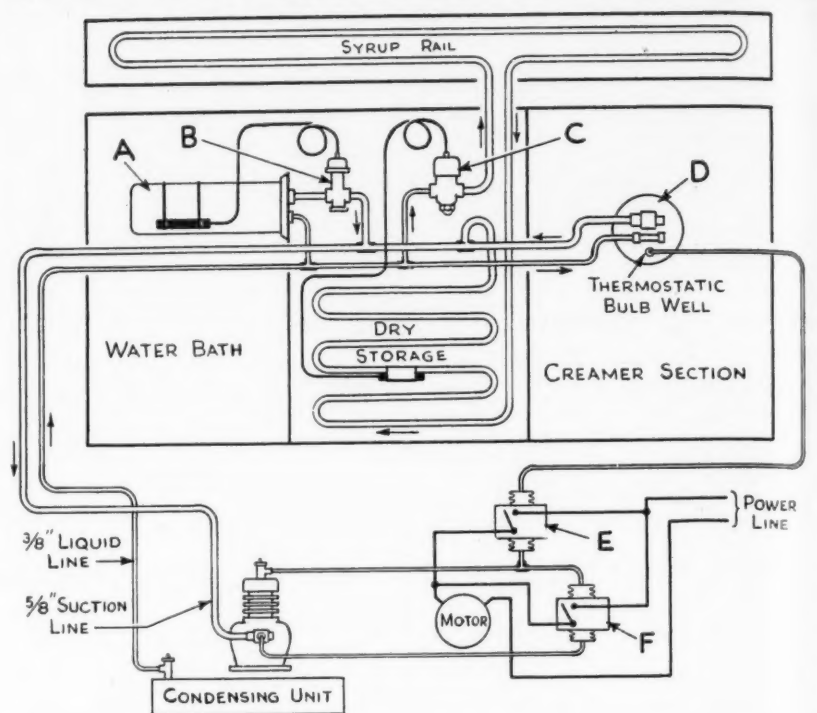


Fig. 2—Diagrammatic view of the "1935 Liquid Carbonic" fountain.

soda water or sweet water cooler, where the warm water enters. The bulb must always be kept under the water level in order that its operation may be automatic.

The condensing unit operation is controlled by two type YD switches. The low-pressure switch supplied with the condensing unit is set to cut-in between 28 and 30 lbs. pressure and to cut-out between 20 and 22 lbs. pressure. This setting will start the condensing unit when refrigeration is required in the water bath, and the temperature regulating valve (B) will control the amount of ice formed.

The auxiliary thermostatic switch

is used to control the temperature in the ice cream section. The bulb of this thermostatic switch must be mounted in the bulb-well found in the front of the flooded boiler. This well should be filled with oil or glycerine and plugged so that no condensation may form inside the well. A brine temperature of from  $-3$  to  $-5^{\circ}$  F. should be maintained near the center of the tank and this setting will be found within the range of the cold control adjustment on the thermostatic switch.

Both the low-pressure switch (F) supplied with the condensing unit and the thermostatic switch (E) are

(Concluded on Page 17, Column 5)

Fig. 3—Syrup Rail Coil

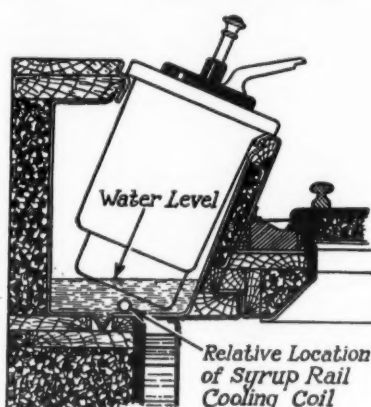


Fig. 3 shows how syrup jars in a soda fountain are cooled.

the outside of the bulb before the valve is completely closed. To obtain a greater ice formation, the valve should not be adjusted but rather the bulb should be moved further from the boiler.

The jar enclosure is refrigerated by a coil of copper tubing which runs the entire length of the enclosure. This loop of  $\frac{1}{4}$ -inch tubing is located at the bottom of a  $1\frac{1}{2}$  inch high water bath in which the lower ends of the syrup jars are immersed (see Fig. 3). This jar enclosure coil is connected in series with a drier coil of  $\frac{1}{2}$ -inch tubing which is installed flat against the wall of the dry storage compartment and acts as an evaporator to assist in cooling this compartment.

The liquid refrigerant entering the jar enclosure coil is controlled by a thermostatic expansion valve (C) which has its bulb clamped to the third turn from the bottom of the dry storage evaporator. The direction of expansion is from the bottom to the top. The suction line from this  $\frac{1}{2}$ -inch coil enters the main suction line as shown in Fig. 2.

In later models, this connection was changed so that the suction line from the  $\frac{1}{2}$ -inch storage compartment coil was connected into the suction line between the water bath boiler (A) and its temperature regulating valve (B). With this latter hook-up, an adjustment of the temperature regulating valve (B) likewise controls the thickness of ice formation in the syrup jar enclosure.

The water bath compartment is equipped with an automatic motor-driven agitator which is thermostatically controlled. The thermostatic bulb controlling the agitator switch is clamped to the inlet end of the

Fig. 4—Wiring Diagram For YD Switches

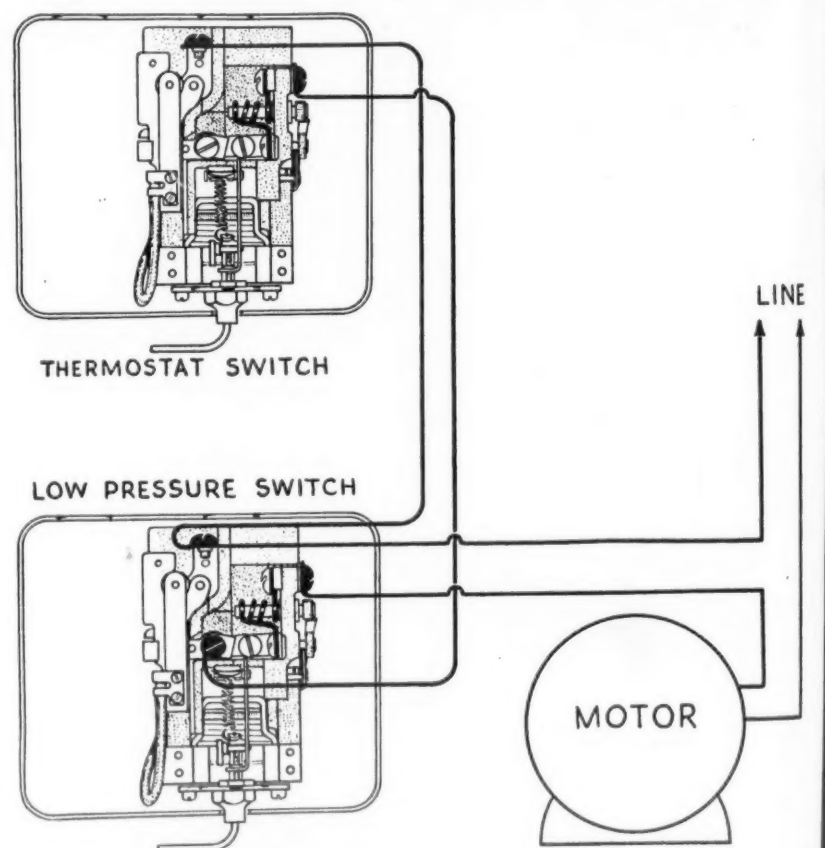


Fig. 4—YD switches connected in parallel and heater elements in series.

Fig. 1—Double Unit YD Switch

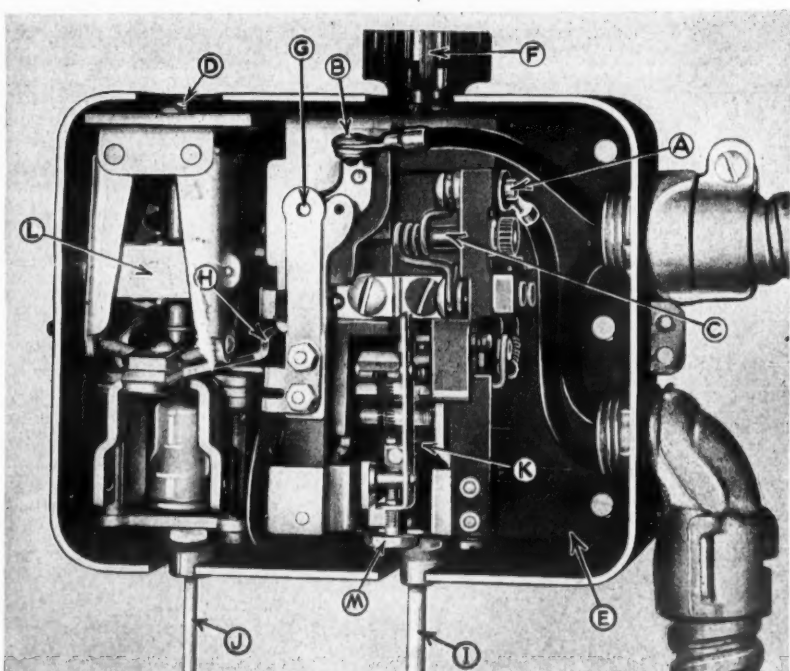
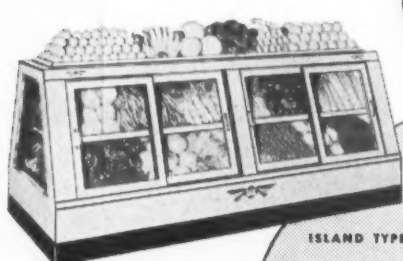


Fig. 1 shows interior of a double unit YD switch. Key letters: A. Electrical connection, B. Electrical connection, C. Heater element stud, D. High pressure adjustment, E. Metal case, F. Adjusting knob.

G. Movable contact piece, H. High pressure contact arm, I. Thermostat connection, J. High pressure connection, K. Control bellows, L. High pressure unit, M. Differential adjustment screw.



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## Merkel Describes Work of Jobbers Group And Tells of Problems To Be Solved

(Concluded from Page 12, Column 5)

bulletin as interesting as it has been. An analysis of the many problems presented to our headquarters office by individual members reveals that a large percentage of these matters have to do with situations which affect a particular locality rather than the entire membership. Such problems usually require prompt solution and in the solution of them the Association secretary usually can be very helpful,—particularly if he can get into them promptly.

In our budget for this year we set up a sizable sum for traveling expenses by our secretary to render this type of service.

Due to the necessary curtailments which had to be made in our expenditures from lack of the expected income, we were greatly handicapped in this regard.

Then there is another important type of contact to which reference is in order—our contacts with our manufacturer friends. Heretofore we have functioned through a joint Manufacturers'-Jobbers' Relations Committee composed on our side of a committee made up of jobbers and on the manufacturers' side a committee composed of manufacturers, each of whom theoretically represented a different line of products.

### CLOSER TO MANUFACTURERS

Due to the variety of lines represented in the Manufacturers' Association and therefore the impracticability of representation of each line on the Manufacturers' Committee, it frequently happened that there was no one present who was familiar with a given problem needing attention.

With the cooperation of the members of the Manufacturers' Relations Committee, we struck upon the idea of asking all of the available executives of the various companies in a specific line on which there was a problem to meet with us simultaneously.

We hope, too, that this machinery will offer an opportunity to the manufacturers, individually and/or collectively, for a given group to contact us on questions of policy before he or they make a final decision thereon. There is still a third type of contact that has come quite permanently into our picture this year.

### SECTIONAL JOBBERS GROUPS

To provide an effective and economical means of a solution of the more or less local problems and to establish a closer contact with our national organization, the formation of group and district jobbers' associations has been encouraged—in some instances these group organizations were formed upon the initiative of one of the members of your Board of Directors—others upon the initiative of the members in the group itself. As a result of this movement, group organizations are now functioning in New England, the Middle West, the South West, and on the West Coast. The Metropolitan Chicago Association is now nearly two years old. In Metropolitan New York City the jobbers are meeting informally, I understand, and regularly.

Your Board of Directors has held meetings at various times during the year. Meetings instead of being held at stated intervals were called at opportune or necessary times in order to conserve our limited budget for Directors' traveling expense. On a few other occasions, your officers together with one or two nearby Directors met informally to consider matters brought up on short notice, such matters being later submitted to the entire membership of the Board by mail for approval or final action.

### QUICK RULINGS NEEDED

This suggests consideration of a change in our by-laws to authorize an executive committee with power to act upon matters that require a prompt decision with a reservation, however, that its authority does not extend to matters of general policy. In the earlier part of this report, I referred to the difficulty of selecting those problems that are necessary of solution to provide a base from which to work out major problems. Many suggestions, comments, and complaints were received in response to the invitation to members in The Month's Work to present their

views. These naturally were far from uniform and evidenced a very considerable difference of opinion as to what is most desirable, what is wrong, and what is possible of accomplishment.

Members at times overlook the fact that there are legal and ethical restrictions which govern the work of trade associations. Too many, and too diverse problems were submitted and too much was expected by some of our members within too short a time.

### SURVEY CLEARED PROBLEMS

In view of this evidence of perhaps confused thinking and lack of factual information, it was felt necessary to collect facts as to our problems and their comparative importance. Actions without a full basis of facts are too apt to result in misjudgments.

How to secure this information with fairness to all was a problem. After much discussion and consultation with representative members of various groups more or less concerned, several questionnaires were worked out and submitted to our membership and to our suppliers.

The compilation of replies to our last, and our most important questionnaire, is available for the inspection of our members. The results of these questionnaires, we hope, will serve as a starting point for the solution of many of our mutual problems.

As a result of our surveys and from the stream of correspondence that has been available to me, I have endeavored to sift out subjects for the consideration of this convention and for future study.

### TRADE PRACTICES

They can perhaps be classified under the heading of "Trade Practice" and "Trade Problems." In the first category are such matters as cash discount; minimum charge per invoice; 5% Federal Tax on household replacement parts, and freight allowances on incoming merchandise.

It is an accepted business fact that prompt payment of obligations is an economic necessity. Consequently, invoices are subject to so called terms—a limit time for payment with generally a cash discount as an inducement for early payment. There is apparently no uniformity in the refrigeration jobbing business due perhaps to the variety of terms which manufacturers impose, and too, the comparative newness of the industry.

It is physically and practically impossible for the jobber to pass on to his customers the payment terms to which he is subject by various manufacturers. A single invoice issued by the jobber will frequently include the products of a number of manufacturers whose terms may vary from—net on presentation of invoice to various percentages and time limits for cash discount or payment.

### MONTHLY TERMS BEST

To relieve both the customer and the jobber of the intolerable burden and expense of keeping track of numerous maturities subject to a variety of terms, it is a general practice in the jobbing or wholesaling of commodities used by a great variety of industries to grant terms for payment on a monthly basis, which practice many of the refrigeration jobbers' customers are insistent upon, due to perhaps previous experience or present experience with other suppliers.

Under this custom, invoices for all purchases made in one month are generally subject to a cash discount, usually 2% on or before the tenth of the following month and net on the thirtieth of the month. Lack of uniformity and strictness in credit terms is perhaps responsible for many so called credit problems.

The more or less common practice, or perhaps necessity for jobbers to allow a 2% cash discount, in many cases reduces their net margin of profit by a considerable amount and should receive the consideration of our suppliers. The great variety of payment terms to which the jobber is subject also adds considerably to the burden and expense of bookkeeping.

There are a considerable number of items used as replacement or parts on domestic refrigerators which are subject to a 5% Federal Tax paid by the manufacturer and in turn charged

to the jobber. The government is only interested in the payment of the tax by the manufacturer. Subsequent sellers may do anything they please about it.

### CHARGING FEDERAL TAX

It has always been a source of trouble and argument, difficult to pass on and difficult of collection. The jobber is subject to constant claims and bickering due to the allegation that it is not being charged by others. This matter has already received some consideration and has been solved in some cases by the issue of suggested resale sheets, which reflect or include the addition for Federal Tax, bearing a notation—"Above prices include Federal Tax" or words to that effect. It would be a big help if all suggested resale sheets involving items on which there is a 5% Federal Tax were adjusted to a similar basis.

The matter of f.o.b. factory prices is another subject that has been a matter of discussion and difficulty, especially on larger and heavier commodities where freight is a real consideration. In the case of most items purchased from manufacturers by jobbers supplying other industries, f.o.b. factory with full freight allowance on a specified minimum is almost a universal practice.

### DETERMINING PRICES

It is an item difficult of administration and collection except on direct shipments. On items which a jobber carries in stock in order to give service, any addition for freight from factory in order to preserve his none too wide profit margin, is particularly troublesome and the subject of much argument, as it is difficult to determine the amount of freight, since actual freight on different items will vary widely, depending upon weight, freight classification, and distance.

What the customer wants and is entitled to, is an exact price. A quotation or invoice with approximate additions and qualifying conditions just naturally arouses antagonism and a tendency to shop around in an endeavor to find someone who will waive them. I have actually found instances where jobbers, on items which were carried in stock and on which the cost basis was f.o.b. factory, plus 5% Federal Tax and 30 days net, sold on a delivered from stock basis with no addition for Federal Tax and less the uniform 2% cash discount rather than run the risk of antagonizing a customer by making these various additions.

Adjustment of suggested resale

prices to avoid the necessity of such additions will not only be helpful to the jobber but will avoid a real and psychological antagonism against a manufacturer's product. The jobber certainly cannot afford to absorb these extras which when deducted from the available gross profit convert what might be a small net profit into a considerable loss.

### MINIMUM CHARGE?

A minimum charge per invoice is another matter worthy of consideration. There are unfortunately many so-called nickel and dime items in the refrigeration supply industry and many buyers whose principal purchases for their day-to-day requirements constitute such items. The cost involved to determine a customer's requirements, get out an order for such parts and run such an order through the various steps to the final entry on the jobber's books and collection, is frequently many times the profit on the sale.

In matters which I have classified as trade problems, I have been impressed by a considerable degree of unanimity in the expressions of our members.

Among those peculiar to the business, again due to many items carrying a low unit price, is a low average value per sale or invoice. A preliminary survey indicates that the average sale or invoice is slightly in excess of \$10, with a large percentage in the less than \$5 bracket. This naturally increases the general cost of doing business, since the handling of numerous small items affects the general average cost. The net cost of handling a 25 cent item in all its phases is little less than a \$10 or \$25 item.

### HANDLING LOW-COST ITEMS

It would seem that each line of merchandise should stand on its own feet and that some form of sliding scale schedule should be considered to compensate for the increased cost of handling low cost items. This problem has been very effectively solved on a number of lines but not perhaps those that offer the greatest difficulty.

A further study and analysis of jobber's sales is suggested to determine relative amounts per sale or invoice and by percentages of total number of invoices. For instance, the percentages of invoices less than \$2; \$2 to \$5; \$5 to \$10; \$10 or more, or some similar breakdown. Such an analysis should also include a list of those commodities that are the most frequent cause of low amount per sale or invoice. This will indicate

those items on which adjustment should be made.

In my preliminary remarks, I outlined in some detail the origin of the refrigeration supply jobber, his functions, and the facilities he offers for distribution of refrigeration parts and supplies. In other fields of industry, notably the mechanical or so-called capital goods industries, where there is a requirement for a larger number of component products made by a considerable number of manufacturers, distribution through the jobber has apparently proven its economy. This is indicated by the mere fact that the jobber is today, after having served those requirements for many years, supplying a larger number of commodities than ever.

To be successful, it requires constant and close attention to changes in commodities, changes in customer's requirements, and even a knowledge of the personal characteristics of individual customers. It is my considered opinion, born of a considerable experience and opportunity for observation that it does not very well mix with any other endeavor.

Consequently, the jobber needs not only a sufficient differential between his cost and selling price to leave a final net profit, but most important to his future and ultimate success is a consistent policy on the part of his suppliers to give assurance that he will be protected and receive the reward to which he is entitled for the risk he takes and the time, energy, and money he expends in the interest of any line of products.

## Controls Described For '1935 Carbonic' System

(Concluded from Page 16, Column 5)

connected in parallel as shown in Fig. 2.

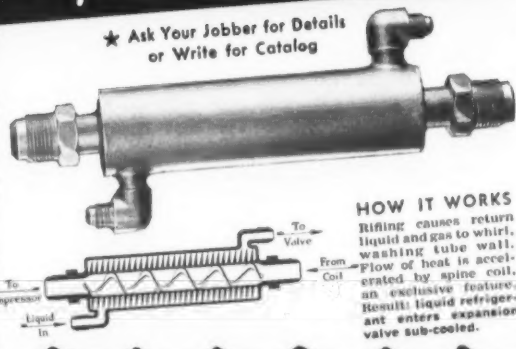
It will be necessary to connect the high-pressure cut-out element of both switches to the high-pressure side of the condensing unit. Either switch can start the unit and keep it in operation until the cut-out point of the switch is reached. The high-pressure safety cut-out point must be the same on both switches, and the thermo overload elements must be wired in series in order to furnish adequate protection at all times.

Fig. 4 gives a more detailed wiring diagram showing the switches connected in parallel with the overload heating elements wired in series.

## THE BUYER'S GUIDE

### PEERLESS Capacity Booster

★ Ask Your Jobber for Details  
or Write for Catalog



HOW IT WORKS  
Fitting causes return liquid and gas to whirl, washing tube wall. Flow of heat is accelerated by spine coil, an exclusive feature. Permits liquid refrigerant enters expansion valve sub-cooled.

### Raises Operating Back Pressures Increases Coil Capacity

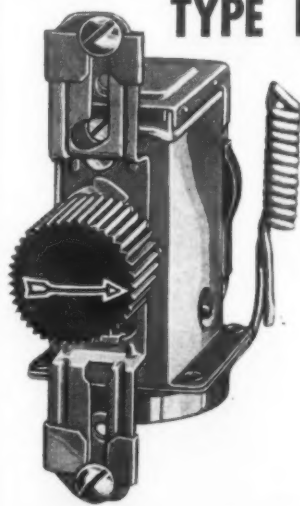
• The Peerless Capacity Booster is a simple, inexpensive unit which will raise the efficiency of any commercial installation, regardless of size. When installed it eliminates "flash gas," and makes every foot of cooling surface work at 100% efficiency. This is accomplished through the sub-cooling of liquid refrigerant by means of returned gas and unevaporated liquid passing through the suction line. It's a natural for picking up extra profits.

PEERLESS OF AMERICA INC.

MAIN FACTORY • GENERAL OFFICES  
515 West Thirty-fifth Street, Chicago

New York Factory  
43-20 34th Street  
Long Island City  
Pacific Coast Factory  
3000 S. Main Street  
Los Angeles  
Export Division  
P. O. Box 816, Detroit  
Michigan, U. S. A.

## TYPE RJS — RANCO'S New General Replacement for All Single Dial Control Applications



A SIMPLE, positive, completely dependable general replacement control for the majority of new-model household refrigerators. Stainless steel construction. Outside differential adjustment. Designed for either vertical or horizontal mounting. Dial pointer serves for cold control, defroster and on-off switch. Mounting brackets are adjustable to suit all mounting hole openings in line with dial pointers.

Ranco INC.,  
Columbus, Ohio, U.S.A.



## THE BUYER'S GUIDE

53 YEARS OF SERVICE 1886-1939

**PERCIVAL Line meets EVERY NEED!**

Includes Coolers, Reach-In Refrigerators, Top Type, Double Duty, Delicatessen, Dairy and Produce Display Cases and Percival Condensing Units.

Quality built; corkboard insulated; porcelain clad; beautifully streamlined. Coiling system is second to none.

Write for attractive prices, literature and Distributor's proposition.

**C. L. PERCIVAL CO.**  
DES MOINES, IOWA

## MILLS COMPRESSORS

for Commercial Use

Mills Novelty Company • 4100 Fullerton Avenue • Chicago, Illinois

## UNITIZED EQUIPMENT (SELF-CONTAINED COMPRESSOR)



Rear View of Unitized Case

Unit installed in counter extension and tested at factory.

Ready for operation on arrival.

Provides greater convenience and handy portability.

Equipment can be moved without disconnecting and re-installing compressor.

Complete line of Refrigerated Food Storage and Display equipment.

Interesting distributor proposition.

Inquire today!

**FOGEL REFRIGERATOR COMPANY** Since 1899  
16th & Vine Sts., Phila., Pa.

**Chieftain** Message No. 25

CONDENSING UNIT FACTS

1. We believed customers wanted "More BTU capacity and less mass capacity".
2. They did.—They bought over 100,000 compressors in one year.

**TECUMSEH PRODUCTS CO., TECUMSEH, MICH.**

**PITTSBERG**

REFRIGERANTS

**GUARANTEED REFRIGERANTS For All Applications**

Triple-Refined SULPHUR DIOXIDE  
New Process METHYL CHLORIDE  
High-Test METHYLENE CHLORIDE  
Kinetic Chemicals "FREON-12"

Sold By Leading Jobbers and Distributors Throughout the West

**PITTSBERG CHEMICAL CO.**  
Central Tower, San Francisco, Calif.

For bigger profits—for greatest economy & maximum efficiency, sell the genuine



**The Industry's Leading Forced Convection Unit**

You can be assured of enthusiastic satisfaction and outspoken good will by always specifying Larkin Humi-Temp, praised by pleased users everywhere.

**Write Today for NEW LOW PRICES NEW SPECIFICATIONS** ... See how low the cost of this scientifically designed unit that positively gives more fin and tube area, higher relative humidity, less weight loss from stored products; get the new specifications, know why HUMI-TEMP is so much higher in efficiency, so much lower in operating costs. Complete information free by return mail—just ask for Catalog No. 8381.

**LARKIN COILS, Inc.** General Offices and Factory 519 Fair Street, S. E., ATLANTA, GA.  
Branch Factory, 57 East Eleventh St., New York City

Originators of The Cross Fin Coil

## Industrial Relations

### Appreciation For Work Leads Fair Pay In Employees' Preferences, NRDGA Told

NEW YORK CITY—What retail employees want most is appreciation for their work, declared Charles E. Stech, New York, in presenting a report on employee preferences at the recent annual convention of the National Retail Dry Goods Association here.

What retail employers believe the employees are most interested in, Mr. Stech pointed out, is fair pay.

Based on questions put to employees and employers in stores all over the country, the report as presented by Mr. Stech revealed the following preferences in descending order:

(1) What retail employees want—credit for all work; interesting work; fair pay; understanding and appreciation; counsel on personal problems; promotion on merit; physical working conditions; job security.

(2) What retail employers believe employees want—fair pay; job security; interesting work; promotion on merit; understanding and appreciation; physical working conditions; credit for all work; counsel on personal problems.

#### BENEFIT PLANS

At the N.R.D.G.A. convention, Merle C. Hale, director of executive personnel of the General Motors Corp., described his company's employee income benefit plans.

"The effect of such plans," declared Mr. Hale, "will be cumulative because greater stability of income for an important segment of the buying public should reflect itself in greater stability also for retail business, and, in turn, for the manufacturers of consumer goods."

General Motors' plans do not include guaranteed annual wages, Mr. Hale pointed out, but do provide for an advance to the employee in periods of slack business against future earnings. These advances, he continued, do not bear interest, and are repayable only through an opportunity to work. In case of an employee's death, the advance is cancelled.

#### 'PROVIDES A CUSHION'

"In other words," Mr. Hale explained, "what we are doing is to provide a cushion against the impact upon workers' incomes of periods of low production. The large number of employees eligible to participate in these plans will have much uncertainty removed from their budgeting for the year ahead."

"We believe the effects of these plans will be felt beyond the immediate circle of our own employees. As they constitute an important buying group in many communities, greater stability for them cannot but produce a salutary effect upon general business in those communities."

Harry L. Brown, assistant secretary of agriculture, told the retailers that crop control was as necessary as industry's control of production, and that it is to the interest of business men to see that the present crop control program works.

Speaking of the cotton-growing industry, Mr. Brown admitted that he thought the control has been a disappointment in some ways, but explained that this is because it has not been as effective as in industry.

"If we examine the farm programs," said Mr. Brown, "we will find that their difficulties grow out of the lack of effective control rather than because of control."

"If my beliefs are correct, the failure of the present program will not be followed by abandonment of farm aid. It will be followed by a program which is broader and requires more supervision of business."

Business men must plead guilty to four indictments, said Benjamin H. Namm, president of the large Namm department store in Brooklyn, in discussing the present economic state of affairs, its causes and its remedies.

#### FOUR INDICTMENTS

"First," Mr. Namm stated, "they have done a mighty poor public relations job. They were so busy trying to sell their merchandise that they did not find the time or words to sell to the public their important function in the social community."

"Secondly, they failed to develop any political philosophy."

"Thirdly, they concentrated too much upon the distribution of merchandise and not enough upon a more equitable distribution of profits among those who had labored in the distribution of that merchandise."

"Last but not least, they gave too little thought to their relations with their employees. They were backward in providing for better wage scales, shorter hours, job security, old age pensions, unemployment provisions, medical care, better housing, and, of course, collective bargaining."

The Namm store recently instituted a guaranteed annual wage plan for its employees.

#### GUARANTEED WAGE

Mr. Namm asserted that the retail merchants of America are ready and willing to do their utmost to promote recovery, and praised current reforms in employer-employee relations.

It was stated by officials of the N.R.D.G.A. that the volume of spring buying, according to merchandisers' predictions, would probably be 10% greater than that of 1938. Retail stocks at present are reported to be about 12% under last January.

### Refrigerator & Range Companies Will Provide 85,000,000 Man-Hours Work, Williams Says

MANSFIELD, Ohio—Manufacturers of electric refrigerators and ranges will provide more than 85,000,000 man-hours of work on the basis of the estimated market for these appliances during 1939, declares F. B. Williams, Jr., vice president of Westinghouse Electric & Mfg. Co.

"It has been estimated that 1,500,000 electric refrigerators and 360,000 electric ranges will be sold during the next 12 months," Mr. Williams said. "The effect of these sales will not stop at the factories. They will produce the circulation of millions of dollars, and affect the economy of every community in the country."

Mr. Williams emphasized the important role played by inventories in this optimistic view of the industry's future.

"At this time last year," he said, "there were approximately 600,000 1937 model refrigerators in manufacturers' and distributors' stocks which had to be sold during 1938 at reduced prices. This naturally created a disturbing and unprofitable condition all through the year. In addition, general business conditions were such

that repossessions were frequent and clogged up the distribution channels.

"The situation today is entirely different. The best estimate of the number of 1938 model refrigerators in factory and distributors' stocks is 120,000, about one fifth the surplus at the end of 1937. These present no problem in any one locality, and should readily be absorbed by the market without disturbing sales for 1939 models. I think this favorable situation applies equally to other merchandising lines."

He asserted that there is "plenty of evidence that we are facing a period of increasing business activity and prosperity."

### Bastian-Blessing Employees Are Paid a Bonus

CHICAGO—A bonus, amounting approximately to 10% of the company's profits in 1938, was divided among employees and some officers of the Bastian-Blessing Co. of this city. A total of 720 persons received bonuses.

### Employment, Wages Rise In Cooling Industry, U. S. Report Shows

WASHINGTON, D. C.—Manufacturers of refrigerators and refrigerating equipment reported a considerable increase in employment, and large increases in wages and value of products for 1937, as compared with 1935, according to preliminary returns compiled from returns of the recent biennial Census of Manufacturers, released by Director William L. Austin of the Bureau of the Census, Department of Commerce.

Number of wage earners employed in the industry in 1937 was 50,623, an increase of 36.3% over 37,146 reported for 1935, and wages paid, \$71,370,751, exceeded the 1935 figure, \$40,442,915, by 76.5%. Value of products of the industry for 1937, \$363,788,412, showed an increase of 62.3% over \$224,113,941 the corresponding figure for 1935.

The industry, as constituted for census purposes, includes establishments engaged primarily in the manufacture of mechanical refrigerators, both the motor driven or compression type and the absorption or heat-actuated type, and refrigerating systems, both household and commercial, cabinets for sale as such, and industrial refrigerating and ice-making machines.

This classification does not cover the construction, by builders, of built-in cooling rooms, cabinets, etc. All figures for 1937 are preliminary and subject to revision. Detailed statistics on production will be issued later.

Number of establishments reported in the 1937 census was 280, as compared with 275 reported in 1935. Number of wage earners reported above does not include salaried officers and employees, data on whom will be given in a later report.

Item for wage earners is an average of the numbers reported for the several months of the year. In calculating it, it is pointed out, equal weight must be given to full-time and part-time wage earners, which were not reported separately by the manufacturers, and for this reason it exceeds the number that would have been required to perform the work done in the industry if all wage earners had been continuously employed throughout the year.

Quotient obtained by dividing the amount of wages by the average number of wage earners cannot, therefore, be accepted as representing the average wage received by full-time wage earners.

**BRUNNER**

Send for the New

**REFRIGERATION CATALOG**

Seven Models of Compressors  
Fifty-eight Models of High-sides from 1/4 H.P. to 15 H.P.

**BRUNNER MANUFACTURING CO.**  
UTICA, N. Y.

**Dayton**

**V-BELTS**

Silent, vibrationless, dependable, long-lasting. Powerful grip prevents slippage. A nearby distributor carries a complete stock for appliances and machines.

**THE DAYTON RUBBER MFG. CO., DAYTON, OHIO**

World's Largest Manufacturer of V-Belts

**KERO TEST**

Valves and Fittings

The Standard of the Industry

**Kerotest Manufacturing Co.**  
Pittsburgh, Pa.



# Stoker News

## Electric Ignition For Anthracite Stokers Now a Reality, Mulcey Tells ASHVE

PITTSBURGH—Electric ignition for anthracite stokers is now a reality, according to Paul A. Mulcey, assistant director, Anthracite Industries Laboratory, speaking on "Small Stokers" before the American Society of Heating & Ventilating Engineers here last week.

"Automatic ignition has recently been put on a commercial basis as the result of cooperation between the laboratory, a large manufacturer of electrical equipment, and a control manufacturer," Mr. Mulcey said. "Stoker manufacturers may now purchase a complete resistance unit for insertion in place of the lower part of the inside retort surface."

Automatic ignition, coupled with bin-fed anthracite stokers which have ash removal mechanisms, will make anthracite stokers almost completely automatic, as the only attention required will be ash removal once each season.

### OTHER DEVELOPMENTS

Other developments cited by Mr. Mulcey in the anthracite stoker field included a vertical ash removal device, which may be applied to new or existing stoker installations, and a new small anthracite stoker having a capacity of 1/4 to 3 lbs. of coal per hour.

This small stoker is the hard coal industry's answer to the problem of heating domestic hot water in a residence, of firing small space heaters, and operating kitchen ranges. Development work has been directed toward getting a stoker small enough to attach to the average "side-arm" type gas heater.

Dividing the anthracite stoker into five main parts: (1) the coal conveyor system, (2) the ash conveyor system, (3) fan and air-distributing system, (4) combustion retort, and (5) the drive mechanism, Mr. Mulcey said that items 1 and 4 present the greatest problem to designers.

On the subject of conveyors, Mr. Mulcey said the main factors to be considered "come under the general headings of mechanical and chemical (corrosion resistance) characteristics. The system must be so designed as to eliminate excessive congestion and at the same time materials must be

selected which will withstand the corrosive actions of vapors . . . and every effort must be made to minimize the concentration of such vapors."

Common practice in the anthracite stoker field dictates that conveyors for bin-fed models be designed in a manner that will "preclude the possibility of loading the conveyor to capacity," Mr. Mulcey reports. This has been accomplished, he said, by supplying the screw extending into the bin with a smaller diameter, decreased pitch, larger shaft diameter, or intermittent screw flights.

On the subject of coal breakage, Mr. Mulcey asserts that all surfaces in the screw conveyor should be smooth, to assure the free and even flow of coal. "The experience of a number of designers indicates that screw flights should possess square edges, in order to obviate any wedging of particles between the worm and tube walls," he declared.

Considering the problem of degradation of coal at the point of inlet, Mr. Mulcey concluded that "where no special pick-up worm is used, the length of exposed flight must be maintained at a minimum." (Length of flight exposed varies from 4 to 15 inches in common practice.)

### REMEDY FOR CORROSION

Mr. Mulcey pointed out that a remedy for stoker conveyor corrosion due to acids lies in (a) the use of acid resisting materials, or (b) rapid expulsion of vapors from the conveyor tube.

"The simplest and most universally used method for the sweeping of vapor from the conveyor consists of a cross-over between the air duct and conveyor tube in such a manner as to impose the necessary amount of air pressure on the latter to cause a continuous flow of air into the retort. Provision must be made at the same time to limit the amount of air which flows back to the bin to a minimum."

Of the manufacturers of anthracite stokers, Mr. Mulcey found that 45% use wrought iron worms, 30% cast iron, and 25% bronze. Certain materials which resist corrosion are found to be subject to abrasion.

## Automatic Stoker Sales Continue To Rise, U. S. Reports

WASHINGTON, D. C.—Continuing the rise in sales volume begun in July of last year, sales of automatic stokers reported to the Bureau of the Census, Department of Commerce, by 112 manufacturers total 17,681 for October and 7,917 for November.

This compares with 16,956 stokers sold in October of 1937 and 6,500 units sold in November of 1937.

The 11 months total for the year, January to November inclusive, of 91,166 units, is still slightly under the total of 97,199 stokers sold during the first 11 months of 1937, and well above the total of 80,258 units sold during the same period of 1936.

Sales of anthracite domestic stokers totaled 3,255 units in the October-November period, as compared with 2,333 units sold during the same two months of 1937, representing the highest percentage of gain in any classification.

## Combustioneer Exports Up, District Men Hear At Convention

SPRINGFIELD, Ohio — District representatives of Combustioneer division of Steel Products Engineering Co., stoker manufacturer, met here for two days recently to discuss business conditions in their respective territories and to hear the company's sales and advertising plans for the coming year.

Most of the district men injected an extremely optimistic note into their territorial reports, and R. C. Goddard, Combustioneer vice president who had just returned from a European trip, reported enthusiastically on the state of the company's export business.

Mr. Goddard declared that he found increased demand for Combustioneer stokers in England, Norway, Sweden, France, and Finland. "With extensive business also in South America, China, and Canada," he stated, "our export trade last year was the largest in the company's history. And my trip abroad gave me an assurance of a materially increased export sales volume this year."

Plans for sales and advertising for 1939 were presented by H. W. Prior, domestic sales manager. W. S. Burke, commercial sales manager, outlined existing opportunities for this type of business and announced addition to the Combustioneer commercial line of the Ram Feed stoker.

"This unit is produced in two models," Mr. Burke explained, "one for application to low set heating boilers and the other to take care of heating and power boilers."

## Increase In Stoker Sales Reported In Nashville

NASHVILLE, Tenn.—Coal stokers installed in this city between July 1 and Sept. 30, 1938, amounted to 526, as compared to 421 in the same period in 1937, city permit figures show.

## CLASSIFIED ADVERTISING

RATES: Fifty words or less in 6-point light-face type only, one insertion, \$2.00, additional words four cents each. Three consecutive insertions \$5.00, additional words ten cents each.

PAYMENT in advance is required for advertising in this column.

REPLIES to advertisements with Box No. should be addressed to Air Conditioning & Refrigeration News, 5229 Cass Ave., Detroit, Mich.

### POSITIONS AVAILABLE

YOUNG SALES Engineer with foreign trade background and knowledge Spanish, French. Familiar with commercial refrigeration and able to make own proposals. Also merchandising household refrigerators for well known export organization, New York, with possibilities travel later. Reasonable salary to start with good prospects. Write giving age, full particulars, salary expected. Box 1114, Air Conditioning & Refrigeration News.

WANTED: MANAGER who is capable of operating business of selling, erecting and servicing the highest grade refrigeration, air conditioning, refrigerated cases, stokers, home insulation and lines known in the United States, who will take a small

financial interest in the business. The above is a golden opportunity for a capable, energetic, honorable person. Address B.A.W., Box 215, Saginaw, Michigan.

### REPRESENTATIVES WANTED

MANUFACTURER'S REPRESENTATIVES wanted to complete national dealer coverage on "BEERADOR," advertised elsewhere in this issue, and 3 compartment, 3 temperature domestic refrigerator. See previous issues this paper regarding reception of both products at National House Furnishing Show and Air Conditioning and Refrigeration Shows in Chicago. Give complete details first letter, experience, lines now handled, references, territory traveled. JEWETT REFRIGERATOR CO., Buffalo, N. Y.

### POSITIONS WANTED

INVENTOR-DESIGNER. Long list of successful refrigeration devices. Practical experience in the fabrication of steel and brass. Familiar with trade requirements. Capable of follow through from drawing board to finished products. Lowcosts, cabinets, control devices. Age 48. Construction experience 25—experimental refrigeration 10—patents assigned 6. Interested in pioneer work. Box 1117, Air Conditioning & Refrigeration News.

### EQUIPMENT FOR SALE

DEALERS AND SERVICEMEN—Offering Kelvinators, General Electric, Westinghouse, Frigidaires, as is, as low as \$8.00 each, guaranteed fully equipped. Frigidaire compressor units, all sizes, guaranteed in perfect condition. We have brand new boxes, all makes, at below dealers' prices. Write for prices! LANDOR WAREHOUSE, INC., 53 East 10th Street, New York City.

### REPAIR SERVICE

GENERAL ELECTRIC and Westinghouse hermetic units rebuilt. Guaranteed unconditionally for one year. Entire unit. Chipt evaporators reconditioned to look new. Modern shop testing methods employed. General Electric DR1, DR2, Westinghouse, \$30; DR3, \$35. Prices

larger units upon request. GENERAL ELECTRICAL REFRIGERATOR SERVICE OF BROOKLYN, 1573 Coney Island Ave., Brooklyn, N. Y.

GENERAL ELECTRIC and Westinghouse hermetic unit replacement and rebuilding service. One year unconditional guarantee. All units are completely rebuilt on a modern production line, tested through every step of rebuilding with complete test equipment, subjected to exhaustive operation tests for wattage, efficiency, quietness and then Duco finished. General Electric DR1, DR2, and Westinghouse, \$30.00. Quotations furnished on other models. Quick service—guaranteed. REFRIGERATION MAINTENANCE CORPORATION, 321-27 East Grand Avenue, Chicago.

DOMESTIC CONTROLS repaired: Ranco pencil \$1.75, Ranco box \$2.00, General Electric \$2.00, Tag \$2.00, Cutler-Hammer \$2.00, Penn \$2.00, Bishop Babcock \$2.50, Majestic \$2.50, Penn magnetic \$2.50, G. E. Frigidaire \$2.50. In business over 20 years. Our name is our guarantee. UNITED SPEEDOMETER REPAIR CO., INC., 342 West 70th Street, New York City.

CONTROL REPAIR service. Your controls repaired by expert mechanics, with special precision equipment. Supervised by graduate engineers. We stress perfection and dependability before price. One year guarantee on domestic controls. Any bellows operated device repaired. HALETRIC LABORATORY, 1793 Lakeview Road, Cleveland, Ohio.

### MISCELLANEOUS

NAMEPLATES—White core Bakelite; engraved to order, any quantity. Stock sizes for all requirements; prices reasonable. List upon request. A. L. WOODY, 189-AB West Madison St., Chicago.

### PATENTS

HAVE YOUR patent work done by a specialist. I have had more than 25 years' experience in refrigeration engineering. Prompt searches and reports. Reasonable fees. H. R. VAN DEVENTER (ASRE), Patent Attorney, 342 Madison Avenue, New York City.

## You can make COILS with this new IMPERIAL tube bender!

HERE'S something entirely new in tube benders. An Imperial hand tube bender that will not only handle all types of bends but you can easily form round and obround coils with it. Furnished in four sizes for 3/8", 1/2", 5/8" and 3/4" tubing.

Call your jobber and try out one of these new No. 406-F tube benders.

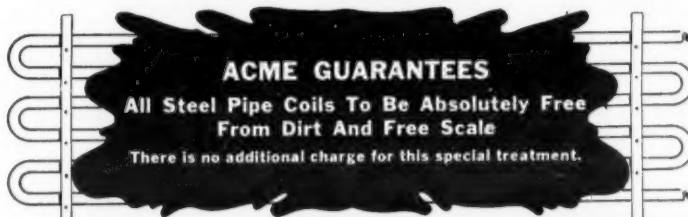
IMPERIAL BRASS MFG. CO., 565 S. Racine Ave., Chicago



## IMPERIAL Tube Benders

VALVES • FITTINGS • TOOLS • CHARGING LINES • FLOATS • STRAINERS • DEHYDRATORS

## PIPE COILS



### ACME GUARANTEES

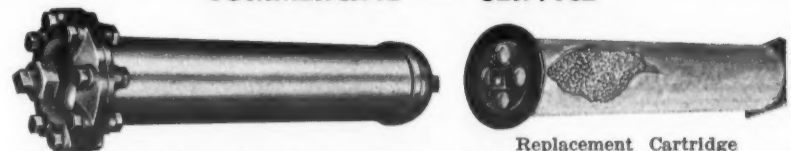
All Steel Pipe Coils To Be Absolutely Free From Dirt And Free Scale

There is no additional charge for this special treatment.

Jackson

ACME INDUSTRIES, Inc. Michigan

## AMINCO DEHYDRATORS COMMERCIAL — SERVICE



Replacement Cartridge

Write us for information about the NEW Aminco Dehydrators. Commercial (non-refillable) service (loose-fill) (cartridge fill). Something new to save time and money for you.

AMERICAN INJECTOR COMPANY  
1431 FOURTEENTH AVENUE, DETROIT, MICH.  
Pacific Coast: Van D. Clothier, 1015 E. 16th, Los Angeles, Calif.

## Nameplates in Perpetual Motion



Constantly working for more sales. Without obligation let our artists create for you an embossed nameplate that will go far beyond merely identifying your product. Today—write for details that will make your plate part of your sales force.

American Emblem Co., Inc.  
Earle Blvd., Utica, N. Y.

Sales Offices: New York, Chicago, Philadelphia, Dayton, Detroit, St. Louis, Los Angeles. Representatives in all major cities.

1914—Our Silver Anniversary—1939

**AMERICA'S BELT BIBLE**  
**FREE** This Gilmer Belt Catalog  
Most complete f.h.p. belt catalog ever issued. 144 Pages. Belts for 4450 models, 135 makes of electric refrigerators listed by lengths, cross-sections, manufacturers' part numbers.  
Your copy FREE  
Send your Name and Address to  
L. H. GILMER COMPANY, Tacony, Philadelphia

**Complete Stocks**  
**IN 7 WAREHOUSES**  
**NEAR YOU!**

We anticipate demands—which means you get what you want—when you want it. And you get it as fast as it is humanly possible to deliver. We have the largest stocks of

AIR CONDITIONING and REFRIGERATION  
PARTS, SUPPLIES and EQUIPMENT

**THE HARRY ALTER CO.**  
1728 S. Michigan Avenue, Chicago, Illinois  
1 CHICAGO BRANCHES — NORTH. WEST. SOUTH  
NEW YORK CLEVELAND ST. LOUIS  
161 161 Grand St. 4506 Prospect Ave. 2910 Washington Ave.



## New Dallas Kelvinator Zone Offices Opened

DALLAS, Tex. — A new zone office of Kelvinator division, Nash-Kelvinator Corp. has been established here with a number of departments consolidated and operating under one direction, it was announced recently by C. J. Bachman, who has been appointed zone manager by the corporation's executive offices in Detroit.

Mr. Bachman declared that Kelvinator is establishing the new zone and making many other improvements in its nationwide organization in anticipation of a period of constantly better business.

Approximately 80 counties surrounding Dallas will be served by the new office, which is located at 707 Young St. In addition, the zone office will supervise Kelvinator household electric refrigerator distributors not only in Texas, but in Louisiana, Arkansas, and New Mexico. It will also supervise distribution of Kelvinator commercial refrigeration products in Texas, Louisiana, and New Mexico, and in the Oklahoma City area.

The new office, he said, will have an experienced personnel, as executives and other members of the organization have been associated with Kelvinator for considerable length of time. Division and department heads will include: R. W. Cox, commercial division; Casper Hinkle, parts depot; R. H. Parsons, warehousing; Mr. Bachman, household refrigeration; and George Blackburn, office and general operations.

The Kelvinator national direct sales division will maintain an office in connection with the Dallas zone office, Mr. Bachman said.

## Detroit Dealers Preview '39 Frigidaire Lines

DETROIT — Frigidaire's products and sales plans for 1939 in both household and commercial refrigeration were previewed by some 300 dealers and salesmen from all over Michigan and northern Ohio at an all-day presentation program in the Masonic Temple here Jan. 23.

Household refrigeration and the advertising program back of it were featured during the morning session, with the afternoon program being made up principally of skits designed to get across the commercial refrigeration story and other profit-building plans.

Ellsworth Gilbert was leader of the crew which staged the showing for Detroit dealers. Assisting him were C. E. Quigley, E. H. Wagner, G. E. Durban, S. V. White, Al Truscott, Jr., I. D. Rowan, C. E. Comer, R. H. Huston, Leon Wilson, Ed Butler, and C. J. Allen.

**PAR CONDENSING UNITS**  
28 MODELS  
1-4 TO 20 H. P.  
WRITE FOR FREE CATALOG  
**MODERN EQUIPMENT CORP.**  
DEFIANCE, OHIO, U. S. A.

**OUR SUPPLEMENTARY CATALOG**  
on Valves, Fittings and Tools for mechanical refrigeration will be ready soon. Send for your copy.  
**MUELLER BRASS CO.**  
Port Huron, Mich.

**SAVE 20-40%**  
Write for details of Alco's new Small Capacity "TK" Thermo Valve  
**Alco Valve Co.** - St. Louis, Mo.

**For Information on Motors**  
FOR ALL TYPES OF  
**Air Conditioning and Refrigeration Equipment**  
WRITE TO  
**Wagner Electric Corporation**  
3811 FLYING DUTCHMAN AVE. ST. LOUIS, MO.

*You Can Install*  
**SPORLAN VALVES**  
THERMOSTATIC EXPANSION  
*with Confidence!*

## 20 Contests, Prizes of \$2,800 in '39 Water Heater Campaign

(Concluded from Page 1, Column 5) heater promotion job performed in 1939.

Major points to be considered in the judging will be: increase in volume over previous year, saturation increase, unit volume, and general campaign excellence. Size and cost of the program will be relatively unimportant.

The second contest is open to utility executives and engineers. A first prize of \$500 and a second prize of \$300 will be paid by Modern Kitchen Bureau for the two best papers on the subject: "Advisability of the Competitive Water Heater Rate and Advantages of the Water Heater Load." All entries in this contest must be postmarked not later than July 31.

Dealers and utilities both are eligible for the window display and advertising contests. First prize of \$100, second prize of \$50, and 10 prizes of \$10 each will be awarded for the best photographs of window displays set up by dealers between Jan. 1 and June 1.

Prizes of \$250, \$100, and \$50 will be awarded for the best newspaper advertising campaigns, consisting of no less than four advertisements, run by utilities or dealers between Jan. 1 and July 31. Award certificates will accompany these prizes.

Fifth contest is open to all retail salesmen of electric water heaters. Three prizes of \$25, \$15, and \$10, and five prizes of \$5 will be awarded at the end of each quarter of the year for the best letters on "How I Sell Electric Water Heaters." Grand prize of \$100 will be awarded for the best letter of the year. Letters may be of any length and will be judged on idea content alone.

The bureau also has made available a supply of advertising and promotional material similar to that prepared for the range campaign. In addition, there is a Visual Manual for the use of the salesman in the field. A two-color, 8½ x 11 book, this manual provides for the injection of some much-needed drama into the water heater sales story.

Backbone of the electric roaster campaign, first national cooperative drive to be made on this appliance, will be a series of advertisements running throughout the year in McCall's magazine and Woman's Home Companion, and during June, July, October, November, and December in the Saturday Evening Post. All advertisements are timed to coincide with peak sales periods of electric roasters.

Though details have not yet been announced, Mr. Martin said that this year's electric refrigerator campaign, like that of last year, will offer a broad series of tested selling ideas and promotional materials. He added that the all-electric kitchen campaign will include a variety of promotional and advertising materials for use by utilities and dealers interested in "ensemble" selling.

## \$2,500,000 G-E Building Planned For Chicago

CHICAGO — A modern building will be constructed here to house the Chicago headquarters of General Electric Co.

Site of the new building, a 75,000-sq. ft. tract bounded by South Canal, South Clinton, West Cabrini, and West Arthington Sts., has been purchased, and work will soon be started on the building, which will provide space for the G-E sales offices, warehouse, and service shop; the General Electric Supply Corp.; R. Cooper Jr., Inc.; and other associated interests.

Estimated expenditure in connection with the new building is \$2,500,000.

## Nash-Kelvinator Directors Are Reelected

BALTIMORE — Stockholders of Nash-Kelvinator Corp. at their recent annual meeting here reelected the following seven directors for the coming year: P. J. Ebbott, George W. Mason, Charles W. Nash, H. G. Perkins, H. T. Pierpont, Ernest Stauffen, Jr., and James T. Wilson.

## Dealer Held Liable For Success of Cooling

(Concluded from Page 1, Column 2) knowledge and assurance of the seller in many instances as to their suitability for the purpose intended, when such reliance is known to the seller, then assurances and representations of performance for a particular purpose should be made good, when they can be shown by evidence to have brought about the sale.

The appliance concern contended the negotiations as to failure of the equipment to adequately cool the laundry and cleaning establishment took place before execution of the note and final acceptance, while the laundry testified that this occurred after execution of the note and that it continually offered to return the conditioner to the seller as inadequate.

## New Crosley Line Designed For Low Income Buyers

(Concluded from Page 1, Column 3) a banner or capstone for the program is, "No other refrigerator has this advantage."

In addition, national advertising copy will be centered around a testimonial theme supported by the experience of owners located in all parts of the country.

Initial orders received from distributors are highly gratifying, Crosley officials report, and reflect the vigorous feeling of renewed confidence in the business outlook for the coming season.

## Initial Orders Are Reported Up By R. Cooper Jr. As Dealers Flock To 'Prosperity Hotel'

(Concluded from Page 1, Column 4) and S. B. Maher, general sales manager of the distributorship who conceived and managed the showing, the dealer was turned over to his field man, who then took him on a personal tour of the "hotel" to look over new products.

Invitations sent to dealers over the signatures of the various field men were spaced as to time of "registration," so that each man could be given personal and individual attention. Guided by the man in the distributorship who contacted them regularly, dealers spent as much or as little time as they wished on individual products.

In addition to special showrooms for each product in the 1939 G-E line, five private conference rooms also were provided, where dealer and contact man might go to discuss and sign initial orders.

A General Electric "Magic Kitchen" display was an added attraction throughout the showing, and was kept going almost constantly to tell its story of labor-saving conveniences.

A section of the fifth floor warehouse space was set aside as a "play room," where dealers and salesmen might go after their business affairs were completed for refreshments and relaxation. This kept the first-floor "lobby" clear at all times for business uses.

When they "checked out" of the distributorship on their way home, dealers were given a carton contain-

ing a dozen special drinking glasses carrying the Cooper and G-E message as a souvenir of their visit.

Attracted by this out-of-the-ordinary presentation method, more than a thousand dealers and salesmen visited Cooper headquarters during the showing, Mr. Maher reports. Initial orders were considerably higher than had been anticipated, he says, and staff members report a general air of optimism on the part of practically all dealers toward 1939 prospects in the refrigeration and appliance field.

## December Excise Taxes Dropped 46%

WASHINGTON, D. C. — Excise tax collections on mechanical refrigerators during December, 1938 totaled \$238,626.09, a drop of 46.2% as compared with collections of \$444,144.87 in the same month of 1937, according to statistics compiled by U. S. Bureau of Internal Revenue.

## Gerald Stedman Leaves Cramer-Krasselt Agency

MILWAUKEE — Gerald E. Stedman has resigned as vice president in charge of market planning for Cramer-Krasselt Co., advertising agency here.



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